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Monthly Cyclopedia and Medical Bulletin

(CONSOLIDATED)

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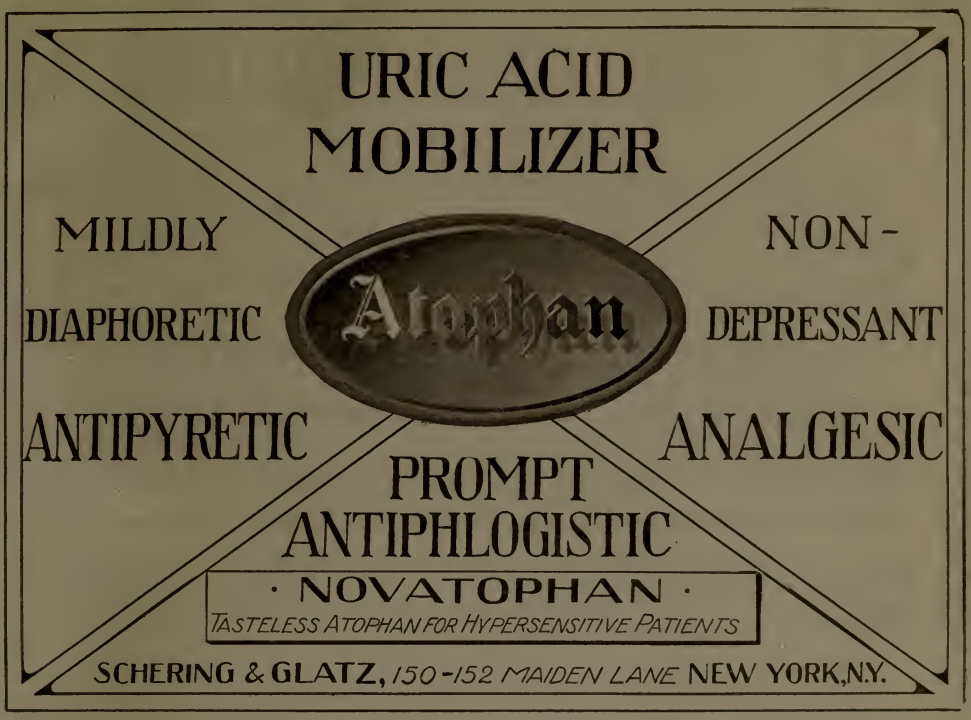

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NEWS AND THERAPEUTIC HINTS.

Medicine of our Forefathers.

What our forefathers accomplished in medicine was chosen as the subject of a paper by J. J. Walsh, of New York. He finds in the history of medicine of the earlier days that some form of anesthetic was used as early as the seventeenth century, that the healing of wounds by first intention was aimed at, and operations were done on the skull for tumor and abscess, and in fact that practically all our surgical discoveries of recent times have been anticipated in the distant past. Even one of our latest triumphs, the suppression of yellow fever, seems to have been anticipated in many of its ideas in an old pamphlet by a Dr. Potter published in the beginning of the last century. As regards medical education the requirements of the first medical schools in this country largely anticipated modern demands. Modern views as regards consumption, the use of cold water in fever, and other matters could likewise be quoted from older writings in like manner. He says our philosophy, our literature, our poetry, our art are nearly all old, and what is best is of the olden time, and asks why should not this be true with regard to medicine, at least enough to make us realize its glorious past history. (Journal A. M. A.)

Silver in Antiquity.

Silver became known to the ancients after they had long been familiar with gold, a circumstance to be attributed to the fact that it is isolated from its ores with more difficulty than is gold. Nevertheless it was used in the most remote historic periods known to us. The Babylonians and Assyrians were acquainted with it, and the Israelites employed it in coinage under the name of keseph. In the time of King Solomon, Strunz tells us, silver was so plentiful that its market value declined. The Egyptians probably derived their supplies of silver from Spain through the Phenicians. An alloy of silver and gold was known to the Egyptians by the name of asm; this contained from 20 to 25 per cent. of silver, and received from the Greeks the name of elektros, later Latinized into electrum. Elektros must not be confounded with elektron, which was amber and found to possess the property of attracting light particles of pith and other substances after vigorous rubbing, and which has given us our modern word "electricity." The Greek name for silver is apyopoz, derived from apyoz, shining, whence the Latin argentum. Pliny says that "silver is never found but in shafts sunk deep in the ground, there being no indications to raise hopes of its existence, no shining sparkles as in the case of gold. The earth in which it is found is sometimes red, sometimes of an ashy hue. It is impossible, too, to melt it (*i.e.*, the silver ore), except in combination with lead or with galena, this last being the name given to the vein of lead that is mostly found running near the veins of the silver ore. When submitted, too, to the action of fire, part of the ore precipitated itself in the form of lead, while the silver is left floating on the surface, like oil on water," and he goes on to tell that silver is found in nearly all the Roman provinces, but that the finest is derived from Spain. The separation of silver from gold, in which a chemical process is involved, was not known until the beginning of the medieval period. (Medical Fortnightly.)

Thallium Acetate in Treatment of Hypertrichosis of Upper Lip.

A. F. Plicque states that this condition, which is particularly distressing when present in women, is best combated by means of the local application of thallium acetate, as recommended by Sabouraud, in the following formula:—

℞ Thallium acetate, 0.3 Gm.
Zinc oxide, 2 Gm.
Vaselin, 20 Gm.
Lanolin,
Rose water, of each, 5 Gm.

The action of this ointment is mild and slow, but it is continuous and progressive. It reduces the length and thickness of the down and decolorizes it. There are no bad effects. (Med. Rec.)

NEWS AND THERAPEUTIC HINTS.

Acute Bronchitis.

℞ Vini ipecacuanhæ, ℥ij.
Liq. potassii citratis, ℥iv.
Tinct. opii camphoratæ,
Syrupi acaciæ, āā ℥j.

(Critic and Guide.)

Eczema, With Tingling and Itching.

℞ Iodoformi, gr. iv.
Olei eucalypti, f℥j.
Petrolati, ℥j.

Sig.: Apply locally.

(Med. Sentinel.)

Adenoids.

In the treatment of acute inflammatory processes in the nasopharynx due to the presence of adenoids, when the condition is sufficiently severe to contraindicate early adenectomy, iodine preparations should be administered internally and the general system toned up with saline baths and rubbings.

Locally, preparations containing menthol are useful:—

℞ Mentholis,
Camphoræ, āā gr. ij.
Olei olivæ sterilisati, ℥vj.

Misce.

℞ Mentholis,
Camphoræ,
Eucalyptolis, āā gr. ⅘.
Oleï amygdalæ expressi, ℥v.

Misce.

These fluids should be dropped in the nostrils, 4 or 5 drops on each side, at frequent intervals.

In the older children, ointments such as the following may be employed:—

℞ Mentholis, gr. iij.
Acidi borici, ℥ss.
Petrolati, ℥j.

M. et ft. unguentum.

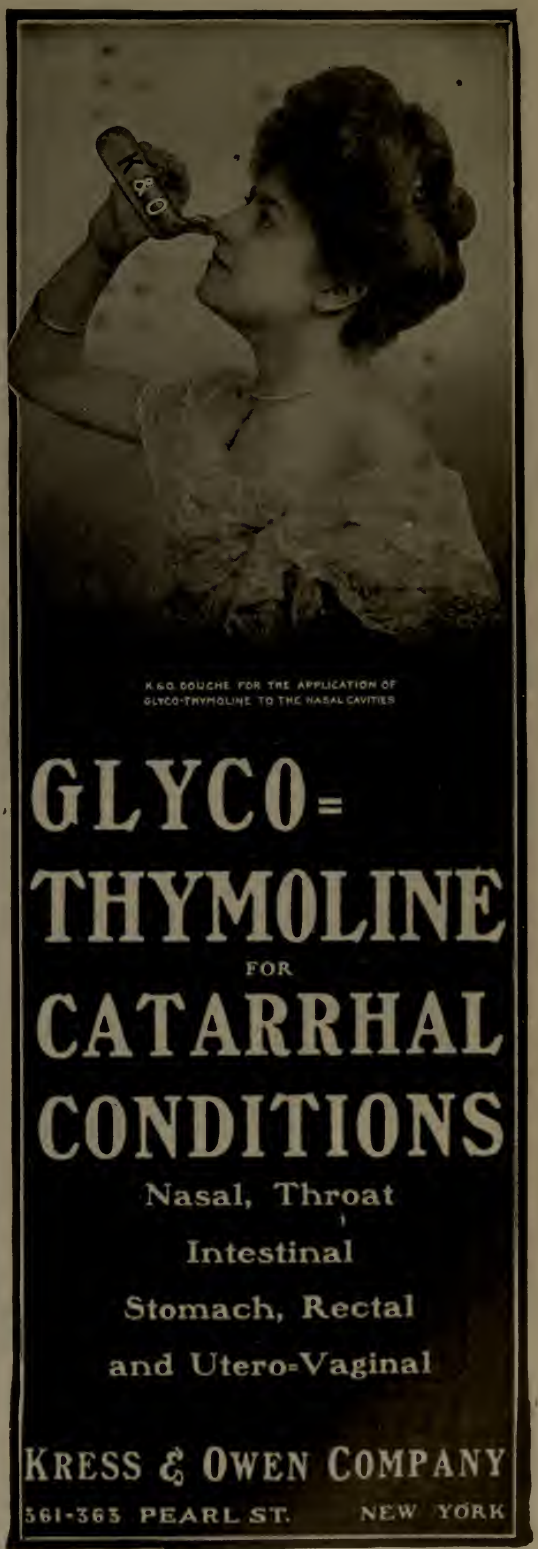
℞ Resorcinolis, gr. viiss.
Acidi borici, gr. xv.
Petrolati, ℥j.

M. et ft. unguentum.

Inhalation of balsamics through the nose should not be forgotten.

℞ Tincturæ benzoini,
Tincturæ eucalypti, āā ℥vj.
Alcoholis, ℥iss.

M. Sig.: One teaspoonful to be used by means of an inhaler. (N. Y. Med. Jour.)



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The adult dose of the preparation is one teaspoonful, repeated every two hours or at longer intervals, according to the requirements of the individual case.

For Children of ten or more years, from one-quarter to one-half teaspoonful.

For children of three or more years, from five to ten drops.

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NEWS AND THERAPEUTIC HINTS.

Depilatory.

A good depilatory is a mixture of 1 dram each of starch and barium sulphide and ½ dram of zinc oxide. Mix with a little water in a watch glass, and apply to the part to be denuded. Remove after two minutes, when the hair will usually have disappeared. (Can. Lancet.)

Lumbago.

℞ Salicini,
Potassii bicarbonatis, āā gr. xv.
Caffeinæ citratis, gr. vj.

M. et ft. in chart. no. xij.

Sig.: One powder four times daily.

The bowels should be kept open with a saline purgative and the patient should rest in bed, if possible. (Tribune médicale.)

Buttermilk for Erysipelas.

Arnold (Practitioner) recommends buttermilk highly as an application for erysipelas. Whatever the stage of the disease, he says the spread of the infection is immediately checked, the pain disappears, and the whole morbid process rapidly aborts when the milk is used locally. It is easy to apply, cheap, can in itself do no harm, and may therefore be given a trial. (Critic and Guide.)

Intestinal Indigestion in Children.

When constipation is marked, Kirby recommends rhubarb and soda of the following strength:—

℞ Pulv. rhei, gr. iv.
Sodii bicarbonatis, gr. viij.
Syr. rhei aromatici, ʒss.
Aquæ, q. s. ad fʒiv.

M. Sig.: One teaspoonful once or twice daily.

Or, if the child can take a capsule, the following for a child from 5 to 8 years of age:—

℞ Tinct. belladonnæ, gtt. ij.
Tinct nucis vomicæ, gtt. iv.
Ext. rhamni purshianæ, gr. i-iij.
Sodii bicarbonatis, gr. iij.

M. et ft. capsula no. j. Sig.: To be taken at bedtime.

The medication may be continued for three or four weeks, after which time 1 dram of syrup of hypophosphites may be given three times a day. This may be alternated with:—

℞ Ferri et ammonii citratis, gr. xxiv.
Elixiris, fʒj.
Aquæ, q. s. ad fʒiv.

Sig.: One teaspoonful three times daily, after meals. (Med. Standard.)

Concerning Medicinal Malt Preparations

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NEWS AND THERAPEUTIC HINTS.

Relief of Fainting.

A. A. Hawkins, Pittsburgh, mentions a procedure which he first observed in St. Peter's Hospital, London, in 1899. It was the custom of the surgeons then to pass bougies and sounds with the patient standing and occasionally one would faint. In that case he was seated in a vacant chair beside the surgeon and his head was pressed down between his knees, thus retarding the return circulation and relieving the brain anemia. A minute in this position was sufficient. It renders the horizontal position unnecessary. (Journal A. M. A.)

Treatment of Hyperchlorhydria.

A. A. Stevens, in Therapeutic Gazette for August, 1913, lays stress on the fact that hyperchlorhydria is merely a symptom, the causes of which differ widely; the treatment should be begun, therefore, by endeavoring to remove the cause. It is, above all, necessary to scrutinize the patient's habits and also to search thoroughly the various abdominal organs for centers of irritation, for nervous influences undoubtedly underlie the gastric irritability and pain accompanying the hyperacidity, which of itself may not be sufficient to produce them. In the majority of cases the chief aim must be to prevent any direct irritation of the stomach and to allay the morbid excitability of the nerve-centers.

From the dietetic standpoint, the object should be to improve general nutrition and thus lessen nervous impressionability. This is best accomplished by a liberal mixed diet of nutritious, bland, easily digestible food. Vegetables poor in cellulose are the most suitable, and these are best taken in the form of purées. Tea and coffee should be used sparingly, if at all, but the drinking of water—not in excess nor too cold—at meals is regarded by Boas as an essential part of the treatment. Excessive smoking is distinctly harmful. Fat, taken liberally in the form of butter, cream, and olive oil, usually proves acceptable and efficacious. It not only diminishes acid secretion, and causes an actual reduction of acidity by inviting regurgitation of the alkaline duodenal contents into the stomach, but also probably acts mechanically as a demulcent and protective of the stomach.

As for drug treatment, bismuth subnitrate may be given in doses of 20 grains (1.3 Gm.) or more, or silver nitrate in doses of ¼ grain (0.015 Gm.), half an hour before meals. Among the suitable alkalies, sodium bicarbonate acts promptly and has no action on the bowel, but may cause distention. Magnesia is especially useful when hyperacidity and constipation coexist. Calcium carbonate may be substituted for or combined with sodium bicarbonate where there is a tendency to diarrhea. Alkalies should be given, as a rule, in doses proportionate to the protein content of the meal. Of sedative drugs, the bromides are particularly useful where the hyperchlorhydric syndrome occurs as part of a widespread nervous erethism; in many cases strontium bromide is best borne. The value of belladonna appears to depend more upon its power to lessen vagal irritability and prevent spasmodic contractions than upon a secretory effect. It is especially serviceable in cases with symptoms of vagotony or abnormal excitability of the vagus (Eppinger and Hess). The drug may be given as the extract in doses of from ⅓ to ¼ grain (0.008 to 0.015 Gm.) three times a day, or as atropine, 1/120 grain (0.0005 Gm.) two or three times a day. (N. Y. Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

New Indican Reaction.

The reaction is obtained by the following method: To 10 c.c. of urine are added 2 c.c. of a 20 per cent. lead acetate solution. The mixture is then shaken and filtered To the filtrate are added ½ c.c. of a 10 per cent. alcoholic solution of thymol, 10 c.c. of ferric chloride hydrochloric acid (Obermeyer's reagent), and 4 c.c. of chloroform. After this the entire mixture is well shaken. In the presence of the most minute trace of indican the chloroform exhibits a beautiful violet coloration. This reaction is much more sensitive than the other indican tests in general use. (A. Jolles, in Zeitschr. f. physiol. Chemie.)

Bedsores.

Mosny and Pruvost, in Bulletins et mémoires de la Société médicale des hôpitaux de Paris, report the case of a young man suffering from bronchopneumonia, and phlebitis of both lower extremities in whom, after partial recovery from these disturbances, a large suppurating bedsore developed and the temperature, previously normal, rose a second time. The sore continued to enlarge, in spite of the usual measures of treatment, until it attained the size of a silver dollar, when applications of hot air—as hot as the patient could stand—were begun. Even at the first sitting, of fifteen minutes' duration, the necrotic base of the ulcer began to redden, and soon after showed a tendency to granulate. The temperature, previously rising, remained stationary for two days, then began to descend, and by the thirteenth day was normal. Seven hot-air applications in all were made, at intervals of two to four days, and on the twentieth day the ulcer was healed. That the hot-air treatment was alone responsible was shown in that, during the intervals between applications, the sore had been merely covered with dry dressings.

Achard, discussing the case just referred to, stated that he had obtained good results with hot air in the treatment of gangrenous ulcers, *e.g.*, in a case of diabetes, as well as in one of Pott's disease with paraplegia. While in the latter case, owing to the trophic nature of the ulcer, the hot air failed to induce healing, it exerted a rapid detergent effect upon the lesion, arresting suppuration and fetor. (N. Y. Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

Ichthyosis.

℞ Resorcinolis, gr. xv.
Aquæ, ♏xxx.
Adipis lanæ hydrosi, ʒv.
Petrolati, ʒiij.
Olei lavandulæ, gtt. vj.

M. Sig.: Rub in twice a day. (Merck's Archives.)

Phlegmonous Tonsillitis.

℞ Ichthyolis, fʒiij.
Ung. belladonnæ, ʒij.
Olei rosæ, gtt. iv.
Adipis lanæ, ʒiij.

M. Sig.: Apply three times a day externally. (Critic and Guide.)

Threadworms or Seatworms.

For threadworms or seatworms the following injection will be found efficient in many cases where other means have failed:—

℞ Salicylic acid,
Sodium borate, of each, ʒss.
Water, Oj.

Warm, and inject into the bowel. For children, reduce all the ingredients by one-half. (Southern Clinic.)

Facial Acne.

The following ointment is applied after the face has been thoroughly bathed with hot water and soap or with ichthyol soap. The ointment is kept on all night and washed off the following morning:—

℞ Camphoræ,
Resorcinolis, āā gr. viij.
Sulphuris præcipitati, gr. xlv.
Saponis mollis, gr. xij.
Cretæ præparatæ, ʒiss.
Petrolati, ʒiiss.

Good results may also be obtained with sulphur lotions such as the following:—

℞ Sulphuris præcipitati, ʒv.
Spt. camphoræ, fʒiss.
Aquæ rosæ,
Aquæ destillatæ, āā fʒv.
Glycerini, fʒiij.

(Brocq, in Merck's Archives.)

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NEWS AND THERAPEUTIC HINTS.

Asthma in Children.

Comby recommends the following formula for the administration of arsenic to asthmatic children:—

℞ Sodii arsenatis, gr. ⅓.
Potassii bromidi, ʒj.
Syrupi aurantii florum, fʒj.
Aquæ destillatæ, fʒij.

M. Sig.: One teaspoonful three times a day. (Critic and Guide.)

Heartburn in Pregnancy.

Hart ("Guide to Midwifery") states that, while heartburn is a very common symptom in pregnancy, it demands attention, since there are always suspicions that it may prove a persistent condition. It may also indicate that in the later stages of pregnancy albumin will appear in the urine.

The patient should be given 10 drops of the B. P. saccharated lime solution in each glass of milk she takes. The lime solution in question is made by shaking calcium hydroxide with a solution of refined sugar and allowing the excess to settle, and contains the equivalent of about 8 grains of lime in each fluidounce.

The following preparation should also be administered:—

℞ Bismuthi subnitratis, gr. x.
Sodii bicarbonatis, gr. vj.
Pulveris rhei, gr. ij.

Fiat pulvis. Mitte tales no. xxiv.

Sig.: One powder twice daily after food in a wafer moistened with water. (Med. Summary.)

Itching in Gall-stones.

To relieve the itching caused by the deposit of pigment in the skin the hot pack on alternate days, or even every day, is serviceable. A very efficient local application for this purpose is the following, which should be applied with a sponge and allowed to dry on the skin:—

℞ Phenolis, ♏viiss.
Glycerini, fʒij.
Aquæ, fʒvj.

(Fussell, in Merck's Archives.)

NEWS AND THERAPEUTIC HINTS.

Gastric Ulcer.

Condurango is said to relieve the pain of gastric ulcer—indeed, claims have been made for a curative property in this disease. It is certainly a good remedy for atonic dyspepsia and chronic gastric catarrh. (So. Clinic.)

Stimulating Liniment.

℞ Spt. ammon. aromat.,
Ol. terebinthinæ,
Lin. camphoræ, āā ℥j.
Alcoholis, q. s. ad ℥iv.

M. Sig.: Apply externally. (Med. Sentinel.)

Senile Neurasthenia.

R. Oppenheim, in Progrès médical, states that neurasthenia in the elderly or aged is most frequently dependent upon intoxications, including autointoxications; upon arteriosclerosis, and upon renal insufficiency. It is not enough, however, to place an old arteriosclerotic or nephritic patient upon a milk diet or a salt-free vegetarian diet, if the physical asthenia, mental discouragement, excessive nervous irritability, and insomnia are to be relieved. The treatment directed against the cause of the condition must be supplemented by certain special measures. Thus, the anorexia often existing with these patients should be overcome and care taken that they ingest sufficient food. If necessary to arouse the appetite, the following mixture may be ordered:—

℞ Tincturæ condurangó, ℥ss (15 Gm.).
Tincturæ gentianæ,
Tincturæ calumbæ, āā ℥iiss (10 Gm.).

M. Sig.: Twenty drops in water a quarter of an hour before each meal.

Or,

℞ Tincturæ condurango, ♏xxx (2 Gm.).
Syrupi aurantii, ℥iv (120 Gm.).

M. Sig.: One tablespoonful in half a tumblerful of water before meals.

Insomnia should be overcome, if practicable, by simple measures alone, such as light evening meals, lukewarm affusions, or hot partial baths (avoiding full baths in arteriosclerotics especially). If such means fail, some of the least harmful sedative drugs will have to be tried, *e.g.*:—

℞ Zinci oxidi,
Valerianæ,
Extracti hyoscyami, āā gr. ¾ (0.05 Gm.).

Ft. in pilulam no. j.

Sig.: One pill before supper and another two hours after.

Once or twice weekly, a cachet containing trional and perhaps heroine hydrochloride may be substituted for the second pill in the evening.

Nerve tonics should be used to combat the patient's general asthenia. Lecithin in doses of 1½ to 7½ grains (0.1 to 0.5 Gm.), either in pills or in granulated form, may be administered; or, injections of oil containing lecithin may be given:—

℞ Lecithini, ℥ss (2 Gm.).
Olei olivæ (washed with alcohol and sterilized), ℥x (40 Gm.).

Ft. in ampullas no. xx.

Sig.: Contents of one ampule to be injected every day. (N. Y. Med. Jour.)

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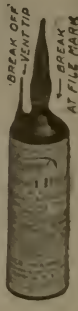

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NEWS AND THERAPEUTIC HINTS.

Sodium Salicylate in Influenza.

℞ Sodii salicylatis,
Potassii bicarbonatis, āā gr. x.
Tinct. nucis vomicæ, ♏x.
Aquæ chloroformi, q. s. ad ℥j.

M. Sig.: To be taken at one dose every two or four hours. (Medical Summary.)

Alopecia.

℞ Pilocarpinæ hydrochloridi, gr. v.
Olei rosmarini, gtt. viij.
Tinct. cantharidis, f℥ss.
Glycerini,
Ol. ricini, āā f℥j.
Spt. camphoræ, f℥iiiss.

To be used twice daily. (Merck's Archives.)

Nasal Catarrh.

The following has been well tried and gives excellent results:—

℞ Oil of pine,
Terebene, of each, ℥ij.
Creosote,
Menthol, of each, ℥ss.
Oil of cinnamon, ♏x.
Oil of eucalyptus, enough to make ℥j.

M. Sig.: Sprinkle a few drops on a handkerchief or cotton-wool and inhale through each nostril separately, or put a teaspoonful into a pint of boiling water and inhale the vapors. (Critic and Guide.)

Sciatica.

℞ Sodii salicylatis,
Tinct. ferri chloridi, āā ℥iij.
Olei gaultheriæ, ♏x.
Glycerini, ℥vj.
Acidi citrici, gr. x.
Liquoris ammonii acetatis, q. s. ad ℥iv.

M. Sig.: One teaspoonful every three or four hours. (Med. Sentinel.)

Fissured Hands.

Brocq, in Nouveaux remèdes, is credited with the following combination, a few drops of which are to be well rubbed over the hands morning and evening:—

℞ Aquæ rosæ, ℥iiiss.
Glycerini neutralis, ℥j.
Acidi tannici, gr. viiss.

Misce.

Before retiring there should be applied to the affected parts either pure hydrous wool-fat or one of the following preparations:—

℞ Vanillini, gr. viiss.
Olei rosæ, gtt. j.
Adipis lanæ hydrosi, gr. lxxv.

M. et ft. unguentum.

℞ Mentholis, gr. xxij.
Phenylis salicylatis, gr. xxx.
Olei olivæ, ℥iiss.
Adipis lanæ hydrosi, ℥iss.

M. et ft. unguentum. (Med. World.)

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NEWS AND THERAPEUTIC HINTS.

Treatment of Gouty Migraine.

The following prescription was recommended by Debout:—

℞ Extract of colchicum,
Quinine sulphate, of each, 3 Gm.
Powdered digitalis, 1.5 Gm.

This is to be divided into 30 pills, 1 of which is to be taken every evening. (Bulletin général de thérapeutique.)

Constipation.

Phoebus, in Paris médical, is credited with the following formula of a laxative suppository:—

℞ Sodii sulphatis exsiccati, ℥ij (8 Gm.).
Saponis pulveris, ℥iv (16 Gm.).
Mellis spissi, q. s.

M. et ft. suppositoria no. iv.

An electuary of sulphur for the treatment of habitual constipation might be prescribed thus:—

℞ Sulphuris loti, ℥j (30 Gm.).
Potassii bitartratis, ℥ss (15 Gm.).
Mellis albi, ℥iij (90 Gm.).

M. Sig.: One teaspoonful once or twice daily. (Can. Lancet.)

Diuretic Mixture in Cardiac Edema.

Fürbringer and Kohlschütter recommend the following:—

℞ Infusion of digitalis, 150 Gm.
Tincture of strophanthus, 3 Gm.
Citrated caffeine, 2 Gm.
Solution of potassium acetate (40 per cent.), 50 Gm.

The dose is one tablespoonful every two hours.

Ortner combines the infusion of digitalis with a double salt of caffeine. He frequently uses theocin or its preparations in conjunction with the infusion of digitalis. (Med. Record.)

Itching in the Presence of Jaundice.

L. Aldor, in Nouveaux remèdes, recommends the following lotion, to be employed for the purpose mentioned:—

℞ Resorcinolis,
Mentholis, āā gr. xv.
Hydrargyri chloridi corrosivi, gr. iij.
Glycerini, ♏lxxv.
Aquæ cologniensis, ℥iij.
Alcoholis, ℥xv.

M. et ft. solutio.

Sig.: To be used as a wash. (Med. World.)

NEWS AND THERAPEUTIC HINTS.

Inhalations for Chronic Bronchitis.

Place in six or eight different parts of the patient's room pieces of blotting paper which have been caused to absorb 2 to 3 drops of the following mixture:—

℞ Menthol,
Eucalyptol, of each, gr. iv.
Oil of turpentine,
Oil of juniper, of each, ♏v.

The patient can thus inhale the active principle without fatigue and continuously. (Bulling, in Medical Tribune.)

Cocoanut Oil as an Insecticide.

Jackson recommends cocoanut oil as an insecticide for bedbugs. He states that all that is necessary is to smear a little of the oil over the place where these insects are found, or where there are cracks and crevices the oil may be dropped into them. By the use of this medium any barrack or hospital ward or article of furniture or bedding can, in a short time, be freed of the bugs, and with a minimum amount of disturbance or upheaval. Cocoanut oil will destroy the ova as well as the adult insect. (Health.)

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NEWS AND THERAPEUTIC HINTS.

Mucous Colitis in Children.

Whipham states that it is necessary to exclude sugars from the diet and to administer alkalies to dissolve the mucus. The following may be given before meals:—

℞ Potassii bicarbonatis,
Potassii citratis, āā gr. v.
Tincturæ nucis vomicæ, ɱij.
Infusi gentianæ comp., q. s. ad f℥ij.

A rhubarb and soda powder, together with 2 grains of gray powder, should be given every night or every other night. (Merck's Archives.)

Tapeworm.

Thymol is said to be an excellent remedy for tapeworm, and in Indo-China, where the affliction is very common, it is almost the only remedy in use at present. It is said to be successful in 100 per cent. of the cases.

The evening before, the patient is allowed only milk, and next morning while fasting he is given 1 Gm. (15 gr.) of thymol in cachet or capsules every hour until three doses are taken. Three-quarters of an hour after the last dose is taken he is given a saline purge. He is ordered not to go to stool until the desire is irresistible and then must sit over a vessel containing hot water. Generally, all is over within two hours after taking the purgative. In the afternoon he is given light diet and next day is allowed his ordinary food.

No oil or alcohol is to be given lest the thymol be suddenly dissolved in the stomach. (Jour. Med. Soc. of N. J.)

Erysipelas.

Dr. Aspinwall Judd, of New York, recommends phenol as being almost a specific in erysipelas. A strong solution is painted on the surface until it whitens and then followed by swabbing with alcohol. The treatment should go an inch beyond the border of the eruption to destroy all germs. The unbearable itching, burning, and throbbing are relieved at once, fever declines, and the general symptoms are relieved. The author states that he has treated successfully 67 cases; in 5 cases it failed. No scarring results. The superficial layers of the skin come off as in mild sunburn and the complexion is improved. (Med. Summary.)

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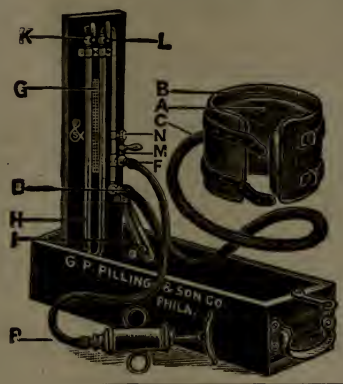

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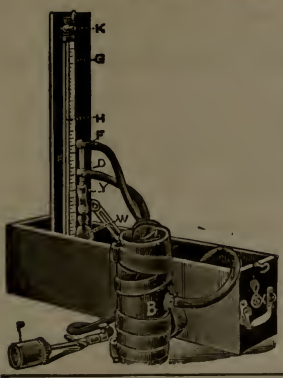

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NEWS AND THERAPEUTIC HINTS.

Pharyngitis.

℞ Acidi benzoici, gr. ss.
Sodii boratis, gr. iss.
Pulveris acaciæ, q. s.

M. et ft. trochischus no. j.

Sig.: One dissolved in the mouth every hour. (Med. Sentinel.)

Purgative.

By combining phenolphthalein with aromatics, as in the following prescription, a palatable and most active therapeutic mixture is obtained:—

℞ Phenolphthalein, ʒiij.
Alcoholis, ℥j.
Elixiris taraxaci compositi, ℥ij.
Elixiris aromatici, q. s. ad ℥viij.

M. Sig.: One teaspoonful at a dose. (Med. Brief.)

Pause in Audible Breathing.

R. Geigel (Münch. med. Woch.) noticed that in listening to the quiet breathing of a healthy individual there is at the end of expiration before inspiration a pause, during which the breathing continues, but is not heard. In feverish patients with increased respirations this pause disappears, and returns again stronger when the temperature declines and the respirations become less frequent and deeper. Therefore the presence of this pause, particularly in sleeping children, is not without diagnostic value. (New York Medical Journal.)

Deodorant for Sickroom.

The following fluid, sprayed through an atomizer about the sickroom, will deodorize and sweeten the atmosphere:—

℞ Eucalyptol, 10 parts by weight.
Oil of thyme,
Oil of lemon,
Oil of lavender, of each, 5 parts by weight.
Alcohol, 110 parts by weight. (Med. World.)

Alopecia in Convalescents.

Brocq, in Journal de médecine de Paris, recommends that, to relieve this condition, the hair be cut every five days for a period of two weeks and the scalp rubbed daily with the following preparation:—

℞ Glycerini,
Rum,
Tincturæ cantharidis, āā ♏lxxx (5 Gm.).
Pilocarpinæ hydrochloridi, gr. viiss (0.5 Gm.).
Olei santali,
Olei gaultheriæ, āā gtt. v.
Alcoholis, ʒiij (80 Gm.).

Misce et fiat lotio. (N. Y. Med. Jour.)

Hepatic Colic.

A. Robin is credited with the following combination for use in hepatic colic in cases without vomiting:—

℞ Potassii bromidi, 6 Gm.
Morphinæ hydrochloridi,
Extracti belladonnæ foliorum, āā 0.05 Gm.
Ætheris, 0.6 Gm.
Syrupi,
Aquæ, āā 20 Gm.
Aquæ laurocerasi, 10 Gm.

M. Sig.: One tablespoonful half-hourly, up to three or four doses. (Paris médical.)

Pyorrhea Alveolaris.

Dr. Joseph Head emphasizes the value of sodium silicofluoride in saturated solution (0.61 per cent.) in water. "This may be held in the mouth for from two to five minutes, three times a day, by patients under treatment for pyorrhea. And while in some cases it does not retard the progress of tartar on the teeth, in many cases it most emphatically does, and as a supplement to scaling of the teeth its healing effect on the inflamed gums is so satisfactory as to be little less than marvelous." (Med. World.)

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NEWS AND THERAPEUTIC HINTS.

Lumbago.

℞ Potassii iodidi,
Potassii carbonatis, āā 3j.
Tinct. aconiti, f3ij.
Aquæ, f3x.

M. Sig.: Poison. Apply locally every three hours. (Erichsen, in Merck's Archives.)

Hemorrhoids.

The following suppository is recommended by Jüngerich (Deutsche med. Wochenschr.) as an application in hemorrhoids:—

℞ Bismuthi oxychloridi, gr. iss (0.1 Gm.).
Zinci oxidi, gr. iiss (0.15 Gm.).
Liq. epinephrinæ hydrochloridi (1:1000), ♏½ (0.005 Gm.).
Eucainæ hydrochloridi,
Mentholis, āā gr. ¼ (0.05 Gm.).
Adipis lanæ hydrosi, gr. viiss (0.5 Gm.).
Paraffini, q. s. ad 3ss (2 Gm.).

M. et ft. suppos. (Prescriber.)

Genital Herpes.

Queyrat, in Paris médical, is credited with the following ointment to be employed in this affection:—

℞ Mentholis,
Guaiacolis, āā gr iij (0.2 Gm.).
Zinci oxidi, 3ss (2 Gm.).
Unguenti aquæ rosæ (recentis), 3v (20 Gm.).

M. et ft. unguentum. (N. Y. Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

Anorexia.

℞ Tincturæ cinchonæ compositæ,
Tincturæ cardamomi compositæ, āā f℥j.
Tincturæ gentianæ compositæ, ℥ij.

M. Sig.: Two teaspoonfuls t. i. d. (Med. Sentinel.)

Frost-bite.

℞ Cocainæ hydrochloridi, gr. iv.
Bismuthi subsalicylatis, gr. xxx.
Adipis lanæ, ℥v.
Petrolati, ℥iij.

M. Sig.: Apply freely. (Critic and Guide.)

Oral Cleanliness.

Hugenschmidt, in Monde médical, is stated to have recommended that in the teething period, after each feeding, the child's mouth should be cleansed with one of the following solutions, to be passed over the mucous membrane on absorbent cotton:—

I.

℞ Acidi borici, gr. xlv (3 Gm.).
Aquæ destillatæ, ℥v (150 Gm.).

M. et ft. lotio.

II.

℞ Chlorali hydrati, gr. xv (1 Gm.).
Aquæ destillatæ, ℥viss (200 Gm.).

M. et ft. lotio.

In the adult, powders employed for cleansing the teeth should never be acid, and in general should not contain either charcoal, which leaves a black line at the gum margins, or phenyl salicylate, which may bring on eczema of the lips. A suitable powder is the following:—

℞ Calcii carbonatis præcipitati, ℥j (30 Gm.).
Saponis mollis, ℥iiss (10 Gm.).
Sodii perboratis, ℥j (4 Gm.).
Olei menthæ piperitæ,
Olei anisi, āā gtt. v.

Misce.

To the above may be added 7.5 grains (0.5 Gm.) of powdered pumice stone in cases where the tartar is hard to remove.

Two good formulas for fluid dental preparations, published originally by Miller and Redier, respectively, are:—

I.

℞ Thymolis, gr. iv (0.25 Gm.).
Acidi benzoici, gr. xlv (3 Gm.).
Tincturæ eucalypti, ℥ss (15 Gm.).
Alcoholis, ℥iv (100 Gm.).
Olei menthæ piperitæ, ♏iv (0.25 Gm.).

M. Sig.: Tooth wash. One teaspoonful in a glass of boiled water.

II.

℞ Thymolis,
Benzosulphinidi, āā gr. iv (0.25 Gm.).
Olei cinnamomi,
Olei caryophylli, āā ♏iv (0.25 Gm.).
Olei menthæ piperitæ, ♏xxiv (1.5 Gm.).
Tincturæ krameriæ, ♏xl (2.5 Gm.).
Alcoholis, ℥iv (100 Gm.).

M. Sig.: Tooth wash. One teaspoonful in a glass of boiled water.

Saccharin alone may be used:—

℞ Benzosulphinidi, gr. xv (1 Gm.).
Aquæ destillatæ, Oij (1 liter).

Salve. (N. Y. Med. Jour.)

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Department on the Internal Secretions

Original Articles and Summaries of Selected Articles

EXOPHTHALMIC GOITER FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.

BY JOSEPHUS T. ULLOM, A.M., M.D.,

PHILADELPHIA, PA.

IN carefully going over my experience with exophthalmic goiter, it has become apparent to me that there are certain difficulties confronting the general practitioner in this disease that are not fully appreciated by the surgeons and consultants, who usually see these patients only when the disease is fully developed and easily diagnosed, and when they are more or less prepared to accept the advice given them.

In the last few years many surgeons have become firmly convinced that this disorder is a surgical malady and should be turned over to them as quickly as should a case of appendicitis. They have held, furthermore, that many of the deaths occurring from this disease are due to failure on the part of the practitioner to recognize the cases sufficiently early, and have declined to operate upon patients when referred because of the extremely bad prognosis in advanced cases.

There is much truth in their contention; yet something is to be said in defense. It is my intention, in this paper, to present and describe some of the difficulties of diagnosis, and to try to formulate a practical method of procedure for the general practitioner.

With increasing interest in hyperthyroidism, many more cases are being observed, and many latent or larval forms are recognized that formerly passed unnoticed. Numerous cases formerly labeled "hysteria," "neurasthenia," and "nervous heart" are now fully recognized and appropriately treated. The

four cardinal symptoms of exophthalmic goiter—tachycardia, struma, exophthalmos, and tremor—do not always coexist, and often in the beginning only one of these symptoms is present, *e.g.*, paroxysmal tachycardia. Again, one may find one or more of the cardinal symptoms, but not in a well-developed form, and the complaint which brings the patient to the physician is one of the host of minor symptoms, such as nervousness, abnormal susceptibility to fatigue, profuse diarrhea, a sensation of heat, or loss of weight. The patients are likely to present a great many nervous phenomena and symptoms referable to other organs, among them nausea and vomiting, diarrhea, flushings and sweatings, a feeling of heat, dyspnea, susceptibility to fatigue, edema; psychic manifestations, such as extreme irritability, indecision, volent temper, or even attacks of mania, and trophic changes, such as falling of the hair, brittle nails, skin eruptions, bronzing, and areas of pigmentation. Schultz[1] gives the percentage of the various symptoms as follows: Goiter, 100; tachycardia, 94; palpitation, 94; exophthalmos, 92; psychic disturbance, 68; tremor, 66; headache, 52; insomnia, 40; sweats, 36; loss of weight, 30; von Graefe's sign, 30; vomiting and diarrhea, 28; Stellwag's sign, 22; falling of the hair, 18; Möbius's sign, 14; nosebleed, 14; polyphagia, 14; polydipsia, 12; pressure in the eyes, 12; edema, 10; hot flushes, 10; friability of the nails, 8; spots before the eyes, 6; pigmentation, 6. Briefly, in a well-developed case the diagnosis is usually easy, but when only a minor symptom is presented time alone will indicate its true identity.

In illustration of the manner in which the general practitioner often sees a case develop, the following histories of three patients are introduced:—

Case I. E. N., a girl of 12, came for coryza, and a marked tachycardia was noted. The pulse rate was persistently over 120, and on the slightest excitement rose to 150. No cause for this condition could be found, and it was thought best to keep the patient at rest for a few days. The tachycardia became much less and only developed upon excitement; the patient was therefore allowed her freedom. She was carefully watched, and one month later developed a small goiter; the tachycardia became pronounced and there was marked nervousness and irritability.

Case II. A. E., aged 48. This woman had always been very nervous, irritable, and subject to attacks of unreasonable jealousy. She suddenly began to lose weight and complained that she easily became fatigued, but had no other signs of the disease. About one month later, she began to feel ill; she developed a marked tremor and exophthalmos, the latter being very noticeable. She never showed a marked tachycardia, the pulse rate being usually about 90. Psychic and nervous phenomena were well marked in this patient, and she had some nausea and vomiting, but her initial symptoms were fatigue and loss of weight.

Case III. L. H., a woman of 58, had always been very nervous, and, while apparently healthy, never felt well. In May, 1911, she had some slight edema of the feet, which could not be accounted for, as her heart and kidneys were apparently healthy and the blood examination was negative. The edema was very slight, however, and soon disappeared. In July, 1911, while in Maine for the summer, she began to have a moderate diarrhea and lost weight; this continued into the autumn. She paid little attention to either condition, however, as she had been stout and the loss of weight was not disagreeable. She did not consult a physician until December, when the diarrhea became so severe that she was confined to bed. At that time there was noted a marked

tachycardia and some bronzing, but no other symptoms. Graves's disease was thought of at this time, but the diarrhea and bronzing suggested the presence of some malignant disease in the pancreas or intestine. The diarrhea was of the watery type, without mucus or undigested food. The diarrhea improved, but the patient's weight remained stationary. It was not until March, 1912, almost a year from the first symptom, that a goiter, exophthalmos, and tremor developed.

From the histories of these patients, it will readily be seen that the diagnosis is not an easy one, and that in a great many instances the practitioner must reserve his judgment for a time and await developments.

Kocher[2] has reported a sign which he considers very valuable in exophthalmic goiter, viz., the occurrence of a leucopenia with a reduction in the neutrophiles and increase in the lymphocytes. He refuses to operate in the absence of this sign.

Undoubtedly a great many cases, although fully developed, are overlooked. The writer has seen in the last three years two such cases. Usually the patients are considered as neurasthenics, but here as elsewhere such a diagnosis must be looked upon with suspicion and no patient must be condemned as merely nervous until all means of diagnosis are exhausted. It must not be forgotten that the disease is usually chronic, with acute exacerbations, and any patient presenting any one of the stigmata, even tremor with occasional attacks of palpitation on excitement, must be carefully watched for other signs of the disease. If the profession will think more of exophthalmic goiter and be more on the lookout for it, many cases will be diagnosticated and cured that are now doomed to hopeless invalidism and misery.

Once the diagnosis is made, what shall we do with these patients? A study of the literature on the treatment of Graves's disease must convince one of the efficacy of surgical treatment; yet there remains a large number of internists and even some surgeons who feel that medical treatment will cure if properly administered. The surgeons with almost complete unanimity plead for earlier diagnosis and earlier reference to the surgeon, claiming that patients too often are sent when moribund or in an inoperable condition. This undoubtedly is true, and it is due, in most instances, to deplorable ignorance on the part of the general practitioner. The diagnosis is made late, little treatment or improper treatment is given, and the patient is referred to the surgeon because of the gravity of the situation.

A perusal of the statistics of Kocher,[3 4] the Mayos,[5 6 7 8] Tinker,[9 10] Mumford,[11] Crile,[12 13] and many others shows that the mortality of the operation is about 3 per cent. Of the patients operated upon, 70 per cent. are cured, 15 per cent. are improved, and 10 per cent. are unimproved.[14]

The only medical statistics found are those given by Mumford for Jackson and Mead at the Massachusetts General Hospital, with the use of Forchheimer's[15] neutral hydrobromide of quinine, 5 grains three times a day. These observers divide their patients into two groups, those heard from by letter and those re-examined after two years. Of 29 heard from by letter, 20 were practically well, 7 unimproved, and 2 dead. Of 56 re-

examined patients 42 (or 75 per cent.) were cured, 7 were improved, and 6 were no better.

Rogers and Beebe,[16 17 18] also quoted by Mumford, in 1909 reported 480 cases treated by their serum. Fifteen per cent. were cured and 10 per cent. had no subjective symptoms, though retaining the goiter and occasionally the exophthalmos. Fifty per cent. were improved, 17 per cent. were unimproved, and 8 per cent. died.

The late Dr. Musser,[19] in a paper published since his death, expressed the opinion that too much surgical work was done in this condition. He felt that exophthalmic goiter was rarely dangerous to life and that the problem was to prevent invalidism and the misery consequent upon it. He urged clinicians to treat their patients more carefully with rest, diet, hydrotherapy, etc., and only to consent to surgical treatment when these measures have failed. It was his firm conviction that with more careful medical treatment few patients would require operation. S. Solis-Cohen[20] has expressed almost the same views. Most writers on the subject, both medical and surgical, feel that medical treatment should be given a thorough trial. In the opinion of the writer, this view is the only reasonable one.

For convenience, patients with exophthalmic goiter may be divided into three classes: (1) The mild; (2) the moderately severe, and (3) the severe. Cases of the first class present few symptoms—a slight struma or exophthalmos, with occasional attacks of tachycardia and palpitation, accompanied by tremor, and probably some of the nervous or psychic phenomena. In the second class are presented struma, exophthalmos, tremor, and more or less persistent tachycardia, combined with nervous phenomena and digestive and vasomotor disturbances. Patients of the third class exhibit struma, exophthalmos, tremor, persistent tachycardia and palpitation, emaciation, severe nervous phenomena, severe digestive disturbance, and sooner or later, weakened myocardium and the conditions incident thereto.

In treating these patients, the practitioner must have some more or less fixed program, and the following seems to the writer to be a sensible one:—

In Class 1 the patient should be treated very carefully by medical means and should be closely watched after apparent recovery. In this class the great majority will recover with medical treatment alone, but if they remain stationary, or fail to improve, they can be quickly turned over to the surgeon.

Class 2 patients should be told of both treatments, but wherever possible subjected to prolonged medical treatment. In this class, of course, it is necessary to keep the case under treatment for a long time, and some patients will not agree to this, preferring the surgical operation. Under these circumstances, after fully explaining the two treatments, the operation should be performed, followed by careful medical treatment.

In Class 3 surgical intervention cannot be attempted until the symptoms have been ameliorated by medical means. If the symptoms can be cured by medical measures, well and good, but if a condition short of cure is reached, and the operation can be safely recommended, it should be done.

Early diagnosis is the key to the situation in this as well as in many other disorders, and with earlier diagnosis more cures will be reported. It must be remembered that a do-nothing policy is apt to breed disaster, and these patients must not be allowed to go untreated until their disease has reached the last stage.

The temperament of patients must always be considered. The ultra-conservative will always wish to try non-surgical treatment, and the radical will often contemn the slow improvement resulting from medical treatment, but the practitioner must not allow himself to be swayed from his conviction as to the proper disposal of each patient.

In this connection a few words on the subject of the *medical treatment* of exophthalmic goiter will not be inappropriate. If the prevailing view as to the etiology of the disease is correct, surgical treatment is logical, for it removes the cause, viz., the overacting thyroid gland. Medical treatment at present is principally symptomatic. It aims to improve the nutrition, quiet the heart, and allay the nervous manifestations. The first essential is *rest*—rest of mind and body, rest in bed. The strictness with which this should be carried out varies in different cases. In some rest should be as absolute as in a case of typhoid fever; in others it should be as for an incipient case of tuberculosis. Each patient must be carefully studied and specially treated. No hard and fast rule for all cases can be applied. The discontinuance of rest must be very gradual and based upon the condition of the patient. Increase in weight, decrease of the pulse rate, and amelioration of the nervous phenomena are the criteria by which one may judge when to allow the patient to sit up and stand up. The erect position must be assumed and exercise permitted very cautiously, and the patient must proceed by easy stages. An essential part of the rest treatment is the correction of eye-strain and the removal, if possible, of worry or excitement. The treatment is usually best carried out in a sanatorium or hospital.

Food.—The diet should be plain, but highly nutritious, and must be suited to the individual. Meats in moderation, fresh vegetables, fruits; greens, such as celery, spinach, lettuce, etc., and very simple desserts are to be permitted. Highly seasoned food, condiments, pastry, candy, and rich salads must be denied. Milk and raw eggs must oftentimes be pushed, especially when appetite is lacking; large quantities should then be taken.

Fresh Air.—The patient is probably best treated, as in tuberculosis, in the fresh air; if this is not possible, the room should be thoroughly ventilated at all times.

Gastrointestinal Tract.—Toxins elaborated in the intestines exert a harmful influence and must be eliminated. The bowels should be kept active and the digestion in good working condition. Laxatives may be taken, if necessary, and an occasional brisk purge is beneficial. Nausea and vomiting have often to be treated.

Bathing.—The skin should be kept in good condition, and a cleansing bath given daily. This may often be advantageously followed by a hot and

cold douche to the spine; or, a very hot bath followed by a very cold one may be given.

Massage.—Light general massage may often be administered with advantage. It takes the place of exercise and rests the body.

Remedies.—General nervousness, insomnia, and palpitation are the symptoms which annoy these patients most. For the first two, bromides in large doses are usually effective. They have sometimes to be given in doses of 60 or 80 grains a day. Trional, sulphonal, veronal, and other soporifics become necessary in most instances. The palpitation is usually best treated by the ice-bag or the ice-water coil.

As for specific medication, many preparations have been suggested, among which may be mentioned thyroidectin, the milk of thyroidless goats, thymus extract, neutral hydrobromide of quinine, and Beebe's serum. Neutral hydrobromide of quinine in 5-grain doses four or five times a day has been very strongly recommended by Forchheimer, and in a personal communication he stated that he had used it in a great many cases with unvarying success and that many of his friends had also used it successfully. The statistics of Jackson and Mead, already quoted, speak well for this treatment. My experience with the drug, though limited, has been very satisfactory. With the other specific substances I have had no experience, except in the case of Beebe's serum, and that was used only in one patient. While the result was unsuccessful, a single case does not permit of condemning a treatment.

In conclusion, it may be stated that the essentials in dealing with exophthalmic goiter are early diagnosis, the avoidance of a do-nothing policy, and the early institution of earnest medical treatment. As in tuberculosis, one must have a large heart and a large thumb. Sympathy and tact, combined with firmness, are the keys to successful treatment. If medical treatment, promptly and vigorously carried out, does not succeed, the advice of a surgeon should be sought.

BIBLIOGRAPHY.

1. Schultz: Mitteilungen aus der Grenzgebiete der Med. und Chirurgie, xvi, Nu. 2, 1906.
2. Kocher: Archiv für klinische Chirurgie, xcvi, Nu. 2, pp. 253-555.
3. Kocher: Correspondenzblatt für schweizer Aerzte, March 1, 1910, Nu. 7, pp. 177-208.
4. Kocher: Archiv für klinische Chirurgie, lxxix, Nu. 3.
5. Mayo: Journal of the American Medical Association, Jan. 26, 1907.
6. Mayo: Surgery, Gynecology, and Obstetrics, June, 1909.
7. Mayo: *Ibid.*, March, 1909.
8. Mayo: Journal of the American Medical Association, p. 2174, Dec. 17, 1910.
9. Tinker: Long Island Medical Journal, April, 1908.
10. Tinker: Journal of the American Medical Association, Sept. 2, 1911.
11. Mumford: Boston Medical and Surgical Journal, June, 1910.
12. Crile: Journal of the American Medical Association. June 27, 1908.
13. Crile: *Ibid.*, March 4, 1911.
14. Baruch: Beiträge zur klinische Chirurgie, lxxv, Nu. 1-2, pp. 1-473.

15. Forchheimer: "The Prophylaxis and Treatment of Internal Diseases."
16. Rogers and Beebe: Journal of the American Medical Association, Sept. 1, 1906.
17. Beebe: *Ibid.*, Oct. 5, 1907.
18. Rogers and Beebe: Archives of Internal Medicine, Nov., 1908.
19. Musser: American Journal of the Medical Sciences, June, 1912.
20. Solis-Cohen: *Ibid.*, July, 1912.

A RESEARCH ON THE HOMO- AND HETERO- STIMULANT PROPERTIES OF CERTAIN LIPOIDS FROM THE TESTICLE, THYROID, ADRENALS, PITUITARY, AND BLOOD.*

By HENRI ISCOVESCO, M.D.,

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Testicle.—The author obtained a lipoid from the testicle—analogous to one previously obtained from the ovary—which excites growth of the testes. To 20 large rabbits, of about the same age and weight, he gave in a period of sixty days 45 subcutaneous injections of a 2 per cent. solution of this lipoid in oil. These animals gained in weight 25 to 35 per cent. during the two months, while 5 control animals of like age and weight gained only 7 to 10 per cent. Upon sacrificing the rabbits, the treated animals showed normal weight and size of all the organs with the exception of the testes, the weight of which ranged from 7.45 to 9.9 Gm., while in the controls the weight of these organs was 1.9 to 3.6 Gm.

Clinical trial of this lipoid in the daily dose of 0.02 Gm. (⅓ grain) for thirty days in 11 patients suffering from hypochondria, or neurasthenia with sexual weakness, and in 8 aged men, resulted in increased general vigor, a better mental attitude, and improved capacity for work. In 4 of the 8 old men the blood-pressure was lowered. Vesical tenesmus, due to prostatic hypertrophy, in 3 of the cases, disappeared completely and permanently after an injection of 0.15 Gm. (2½ grains) of the lipoid. No toxic effects were noted from the large doses, either in these patients or in the animals.

Thyroid.—Differing from the above lipoid, which the author regards as "homostimulant," another lipoid, both homo- and hetero- stimulant, was obtained in the form of a pulverulent, waxy, yellow mass, rich in phosphorus, and soluble in ether and alcohol, from sheep's thyroid. This lipoid rapidly becomes altered under the influence of heat and light, assuming a darker color and becoming insoluble in ether. Injected into a rabbit in the dose of 0.01 Gm. per kilo., this lipoid induces in a few minutes tachycardia, dyspnea, intense redness of the ears, and exophthalmos. These manifestations disappear fifteen to twenty minutes after the injection. To 6 rabbits 0.02 Gm. of the lipoid were given in oily solution every day for two months. Sacrificed at this time, the animals presented protrusion of the eyeballs,

* Summary of article in the Bulletins et mémoires de la Société médicale des Hôpitaux de Paris, December 26, 1912.

enlarged lachrymal glands (3.26 to 4.26 Gm., as against 1.95 to 2.5 Gm. in controls), and hypertrophy of the heart, thyroid, and adrenals. The heart in the treated animals always exceeded 15 Gm. in weight, while that of the controls weighed between 8 and 10 Gm. The weight of the thyroid and adrenals was more than doubled. There was also a distinct hypertrophy of the female reproductive organs, though this was less marked than that which had previously been obtained from an ovarian lipoid.

Clinical trial showed that the thyroid lipoid possessed the same therapeutic properties as the whole thyroid and can be advantageously substituted for it.

Adrenals.—A lipoid was obtained from the adrenals which caused hypertrophy both of the adrenals themselves and of the heart, the enlargement of the latter organ being, however, less pronounced than that caused by the thyroid lipoid. The adrenal lipoid also possesses a remarkable property of greatly hindering puerperal involution of the uterus, acting as though it were an antagonist to the corpus luteum. Two months after labor the uterus of a treated animal weighed 16 Gm.; that of a control, 4.6 Gm.

Pituitary.—The author isolated from the pituitary a lipoid having the property of arresting growth, in the sense that rabbits weighing 3 kilos. lost 6 to 7 per cent. of the weight when treated with the lipoid for two months. It exerts, furthermore, a stimulating influence on the pituitary itself, doubles the weight of the adrenals, generally increases that of the kidneys (25 to 38 Gm. in treated animals, as against 19 to 20 Gm. in controls), and seems to have an inhibitory effect on the male generative organs, the testes being generally diminished in size. Changes in the hair and skin were also noted, daily injections of 0.01 Gm. per kilo. causing, in two months, deterioration of the hair, numerous eschars, and skin lesions, such as had not been observed with any other lipoid.

Blood.—The author had previously shown that (1) the erythrocyte has an independent existence in the blood, appropriating to its use material found preformed in the serum or building it up—*e.g.,* hemoglobin—from the various substances taken in; (2) the erythrocyte acts like a monocellular ductless gland; (3) of the internal secretions of the red cells, that of lipoids is among the most important, and it is the liberation of these substances from worn-out red cells which brings into activity the hematopoietic organs and excites the other erythrocytes to form hemoglobin. He now reports a study of the various lipoids of red cells and of the hematopoietic rôle of pure hemoglobin (extracted with ether) and nucleoproteids. It was found that hemoglobin, nucleoproteids, and all but one lipoid were devoid of specific hematopoietic property. The one lipoid exerted a marked influence on the blood of animals rendered anemic by bleeding. Whereas in the control animals blood regeneration took a month or more, in the treated animals the period was reduced to ten or fifteen days. The reason a hemolytic anemia is recovered from more rapidly than a posthemorrhagic anemia is that in the first event the hematopoietic lipoid remains in the blood and excites the blood-forming organs, while in the hemorrhagic anemia the

lipoid has been lost from the body with the red cells. The rabbits treated with the erythrocytic lipoid all showed a pronounced hypertrophy of the adrenals, suggesting that in blood regeneration these organs, excited by the lipoid, play an important part.

Clinically, this lipoid was tried in cases of chlorosis, and, given in conjunction with an ovarian lipoid, it yielded benefit more rapid and marked than had ever been observed by the author before with other methods of treatment. In hemorrhage secondary to uterine fibromyoma and in cases of hematemesis and hemoptysis, exceedingly prompt blood regeneration likewise resulted from the administration of the erythrocytic lipoid.

A NEW VASOCONSTRICTOR SUBSTANCE FROM THE BLOOD AND THE ADRENAL CORTEX.*

By CARL VOEGTLIN, Ph.D., and DAVID I. MACHT, M.D.,

BALTIMORE, MD.

In previous investigations the authors had found that extirpation of the liver, after anastomosing the vena cava and portal vein, was followed by symptoms much resembling those of poisoning by digitalis, viz., high blood-pressure, powerful cardiac stimulation, and often a final standstill of the heart in systole. They now report having isolated the substance responsible for this action from normal mammalian blood. Defibrinated blood or serum of oxen and pigs was dehydrated with sodium phosphate or sulphate, the dry mass pulverized and extracted with chloroform, the resulting extract evaporated to dryness, and the residue treated with absolute methyl alcohol. On evaporation, a white crystalline substance was obtained, very sparingly soluble in water, but freely soluble in organic solvents, which proved to be a powerful vasoconstricting agent, $\frac{1}{300}$ mg. producing a marked and long-lasting (over an hour) constriction of the vessels of a frog's hind legs and of the rabbit's ear. On the frog's, terrapin's, and toad's heart very small quantities exhibited an action similar to that of the digitalis bodies. At first there is a marked increase in the force of contraction of both auricle and ventricle. The volume output and the tonicity of the heart-muscle are augmented. The rate is slowed. Stronger solutions produce irregularity of beat, marked slowing, and a tendency to systolic standstill. The stimulating effect was even more strikingly noticeable in hearts injured or in poor condition at the beginning of the experiment. By exactly the same method, a similar substance was extracted from human blood-serum. It was found that a quantity of extract corresponding to 1 c.c. of human serum, diluted with 500 c.c. of Locke's solution, was sufficient to produce a very marked constriction of the rabbit's blood-vessels, showing that the substance must be

* Summary of article in the Journal of the American Medical Association, December 13, 1913.

present in quite an appreciable amount in normal blood. The substance was also obtained from blood-plasma (citrate and fluoride) and from red blood-cells.

That this substance is epinephrin is absolutely excluded by its method of preparation, its entirely different solubility, and its different, though similar, pharmacologic action—a much longer lasting vasoconstriction and very powerful cardiac stimulation. Neither is it identical with betaiminazolylethylamine, recently isolated by Barger and Dale from the intestinal wall. Observations so far made on the body seem to point to its relation to the lipoid cholesterin, on the one hand, and to the cortex of the adrenal gland, on the other.

Mindful of the large content of cholesterin esters present in the adrenal cortex, the authors were led to examine this structure for the presence of substances similar to the one studied. Fresh adrenals of oxen were carefully freed from superficial fat and connective tissue, the cortex carefully dissected and separated from the medulla; the tissue ground up, desiccated with sodium phosphate, and treated with water-free chloroform; the chloroform extract evaporated, and the residue taken up in absolute methyl alcohol. After repeated recrystallization white platelets with a fatty luster and a melting point of about 50° C. (122° F.) were obtained. None of the physiologic properties of the substance were changed by boiling with weak alkalies, this excluding absolutely the possibility of its being epinephrin, which, as is well known, is not a product of the cortex, but of the medulla. The solubilities and pharmacologic action of the adrenal cortex extract were identical with those of the substance obtained from blood-serum. Furthermore, the adrenal-cortex extract and the blood-serum extract exhibited a similar toxic action when injected subcutaneously or intraperitoneally into mice.

USE OF PITUITARY EXTRACT IN OBSTETRICS.*

By J. CLIFTON EDGAR, M.D.,

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After experience in 70 cases, the author states that pituitary ampoules or vaporoles should alone be employed, as results are inconstant when the pituitary extract in bulk is used. For decided action, 0.4 Gm. of the drug is usually called for, although in ordinary cases, with little obstruction, half that dose was found sufficient. As the effect of the drug lasts but thirty minutes, repetition of the dose is often called for. Intramuscular injection is usually satisfactory, causing no local reaction or pain. Further, no toxic symptoms were observed from the use of the drug even in maximum doses.

Pituitary extract may be combined with ergot when the action of the former fails, and with heart stimulants in shock cases, without compromising

* Summary of article in the American Journal of Obstetrics, July, 1913.

the actions of these drugs. The extract has no place in normal labor. Its administration should be confined in obstetrics to instances of primary and secondary inertia, to post-partum hemorrhage and Cesarean section,—in the last as a substitute for ergot. The drug produces strong intermittent uterine contractions, often prolonged for several minutes. The author has never observed true continuous tetanic uterine contractions (tetanus uteri); but although theoretically the uterine contractions are intermittent, practically in the face of resistance they approach to the continuous in character and clinically must be so reckoned with. Full and even small doses of the drug in the first stage of labor have caused among the author's cases fatal compression of the fetus, premature separation of the placenta, and deep rupture of the cervix.

In the first stage of labor, or where decided obstruction exists in the second stage, the author gives small tentative doses of pituitary extract, not with complete delivery by means of the drug in view, but to bring the head in easy reach of a simple forceps operation. Seven cases were thus treated. The extract acted promptly and efficiently in most of 39 cases of inertia in the first and second stages. Its action was more positive in multiparæ than in primiparæ. It acted better at full term than in premature cases; also better in the second than the first stage of labor when administered shortly after the spontaneous artificial rupture of the membranes. In the 19 cases in which the drug was used immediately after the third stage for post-partum hemorrhage due to inertia, the results were disappointing,—so much so that the author considers its action here most unreliable and not as positive as that of the ergot preparations. In these post-partum cases there was no effect of the drug in 2 cases; it was necessary to use ergot in 2 instances; a hot acetic acid douche in 2 more; to pack the uterus in 7 cases, and only in the remaining 6 cases were good uterine contractions observed. In Cesarean section the author could not observe any advantage of pituitary extract over ergot, aside from the observation that the former acted more promptly and hence need not be administered so early in the operation. In induction of labor the drug failed to initiate contractions alone, but apparently initiated them after the use of gauze, the bougie, or the hydrostatic bag. He believes the drug strengthens already existing contractions not yet apparent to the patient or physician. For primary inertia in abortion cases the results with the drug were disappointing.

In atony of the bowel and bladder and as a galactogogue the results were frankly negative.

The dangers to mother and child in the indiscriminate administration of this drug for primary or secondary inertia of the first or second stages of labor must be reckoned with. Only a few of the 39 cases of inertia were frankly in the first stage of labor, and these were the earlier cases. The remainder were in the second stage, or border-line cases just merging into the second stage. The use of the drug in the first stage is a dangerous practice, liable to cause death or deep asphyxia of the fetus, separation of the placenta, uncalled-for laceration of the cervix, and

possible uterine rupture. In the 39 cases of inertia in the first and second stages, there were 2, and probably 4, stillbirths due, in the author's opinion, to the use of pituitary extract before full dilatation, and 3 instances of deep laceration of the cervix requiring suture to control the bleeding. The author looks upon the use of pituitary extract before full dilatation or dilatability of the cervix as equivalent to the use of ergot at this time. In fact, it is probably more harmful than ergot, by reason of the more powerful contractions produced and the uncertainty of its action. He repeatedly observed prolonged tempestuous contractions when the drug was given in the face of too much resistance.

The action of the drug is most uncertain. One can never predict in a given case, either from the amount of the drug administered, or from the character of inertia and the obstruction to be overcome, how powerfully the drug will act on the uterus. The author has repeatedly observed, both in private and hospital practice, 0.2 Gm. of pituitary extract—one-half the dose commonly employed—produce such prolonged and powerful uterine contractions that uterine rupture was imminent and anesthesia was required to control the action of the drug. The drug should never be employed for inertia in any stage of labor unless anesthesia is at hand for immediate use and preparations complete for immediate operative delivery, if necessary, to avoid uterine rupture.

With due regard to its action and possible dangers, pituitary extract is a most valuable addition to our resources for the treatment of primary and secondary inertia.

EXPERIMENTAL HYPERTROPHY OF THE THYROID GLAND, AND THE EFFECT OF EXCISION OF THIS ORGAN UPON OTHER DUCTLESS GLANDS.*

By WILLIAM STEWART HALSTED, M.D.,

BALTIMORE, MD.

Twenty-five years ago, the author was surprised to find that excisions or transplantations or simple manipulations of the thyroid lobe were, after a time and almost invariably, followed by increase in the size of the remaining portions of the gland, wherever situated. Examination of the hypertrophied tissue revealed the most unexpected and astonishing histologic picture, which, with few exceptions, made its appearance within twenty-two days after operation of any kind upon the thyroid gland, and even in its most advanced type was observed so late as ninety-five days after operation. This hypertrophy has generally been regarded as compensatory. For some years the author has thought that the hyperplasia which followed excision of a portion of the gland might possibly be due to infection of the wound, and this seems corroborated by the results of recent numerous experiments on dogs, in

* Summary of article in the American Journal of the Medical Sciences, January, 1914.

which the strictest aseptic precautions were observed. In none of the thyroids thus far examined has there been the slightest evidence of hyperplasia. That, nevertheless, there is such a thing as true compensatory hyperplasia of the thyroid gland is proved by the fact that when both thyroid lobes and the four parathyroid glandules have been removed and only a film of thyroid transplanted with one parathyroid body, this film hypertrophies enormously, and microscopically displays extreme hyperplasia. Yet the author was surprised to find from this year's experiments that so much as one and one-half lobes may be removed without appreciable effect upon the remainder of the gland. In most of the experiments the skin was disinfected with iodine, but in numerous instances it was not. Formerly the dogs were fed chiefly on raw meat, but during the past year their food consisted almost exclusively of corn bread and cooked lungs of beeves. From the observations of Marine, Reid Hunt, Watson, and others it seems not unlikely that in the diet may be found the solution of the problem. Should it be found that, as a rule, three-fourths or more of the entire gland must be removed before hyperplasia develops, this will strengthen the belief that the thyroid gland is normally in a state of relative inactivity, and that it is an organ with great reserve power, capable of responding promptly, almost instantly, to certain stimuli.

Great difficulties attend explanation of effects upon ductless glands other than the one surgically attacked. In hypertrophy or enlargement of the hypophysis, for example, described by many authors as following thyroidectomy, the formation of colloid has been interpreted by several as signifying a taking on by the hypophysis of the function of the thyroid, the colloid in the former replacing this substance lost in consequence of the thyroidectomy. But when experimental hyperplasia of the thyroid takes place, the colloid, instead of being increased in the remaining hypertrophied lobe, is diminished or disappears altogether; and this being the case, it would seem strange that, after thyroidectomy, it should appear in compensating fashion in the pituitary gland. To the author it appears unlikely that the colloid in the hypophysis which it is assumed makes its appearance in response to thyroid deficiency should signify hyperactivity of that organ, when the same colloid in the thyroid is found in abundance only in the comparatively inactive period of this gland. Is it not more probable that the elimination of the function of the thyroid may lessen, directly or indirectly, the demands on other of the ductless glands, and that the colloid changes noted in the hypophysis and parathyroids after thyroidectomy may signify hypo- and not hyper- activity of these organs? A recent contribution by Kummer concerns a woman, completely deprived of the cervical thyroids and parathyroids, who was kept alive for two years. The autopsy showed in the hypophysis changes apparently identical with those described in the hypophysis of one of Halsted's dogs fifteen months after the removal of both thyroid lobes and of the four parathyroids. This dog, kept alive for this long period by a parathyroid autograft only 14 mm. in diameter, died of tetany on the removal of the transplant.

The author has never observed hypertrophy of the transplanted parathyroids even when total thyroidectomy and total parathyroidectomy have been done. He is not quite willing to accept as proved the observations of others who claim that after thyroid lobectomy the parathyroids are stimulated to compensatory hypertrophy, forming follicles containing colloid. Why should the excision of an amount of thyroid insufficient to bring about thyroid hyperplasia cause compensatory hyperplasia of the parathyroid glandules? And, granted that changes may have occurred in the glandules after thyroid lobectomy, should these consist in the formation of a colloid equivalent to the colloid of the thyroid alveolus if the thyroid-colloid disappears in cases of definite privation and if the accumulation of colloid seems to signify a state of normal or hypo- rather than of hyper- activity? He has never observed hypertrophy of a transplanted parathyroid gland. The tendency of these grafts, in his experience, is always to atrophy. An enormous amount of experimentation must be done before these questions, which are in no sense remote, can be answered. Hypertrophy of the thymus gland has frequently been observed in Graves's disease; and from observations during the past ten or eleven years of a considerable number of such cases in which the greater part of both thyroid lobes has been removed, the author thinks there is reason to believe that the thymus atrophies in consequence of the operation upon the thyroid. The lymphocytosis gradually disappears, and in none of the earlier cases recently examined has the thymus been skiagraphically visible. It would seem, therefore, that the thymus may be activated by the thyroid.

THE FUNCTIONS OF THE PINEAL GLAND *

By CHARLES L. DANA, M.D., and WILLIAM N. BERKELEY, M.D.,

NEW YORK, N. Y.,

WITH THE COLLABORATION OF

H. H. GODDARD, Ph.D., and WALTER S. CORNELL, M.D.,

VINELAND, N. J.

The pineal gland in man has become distinctly a glandular organ with secreting cells and probably a few nerve-fibers. It tends to undergo deterioration at about the seventh or eighth year, but up to that time it may be supposed to have some function. Experiments on this organ were carried out by the authors as follows: (1) The nucleoproteids and the entire gland extracts were obtained and injected into the veins to test the effect on the blood-pressure; (2) they were also injected into young animals—rabbits, guinea-pigs—for a long time to determine the effect on nutrition; (3) the whole gland was fed to young animals; (4) the whole gland was fed to

* Summary of article in the Medical Record, May 10, 1913.

defective and retarded children. Only the glands of young bullocks were used. As a result of their experiences the authors are strongly of the opinion that in the early period of life the pineal has an influence over bodily nutrition, including the development of the genital organs, the deposit of subcutaneous fat, general growth, and mental progress. The extract of the pineal gland of bullocks injected into the veins of dogs had no effect on the blood-pressure. The same extract fed to babies caused an increase in metabolic activity, as evinced by an increase in the nitrogen eliminated in the urine. The authors report a case of tumor of the pineal gland which seems to show that in adult life entire destruction of the pineal gland does not affect metabolism. One of the authors succeeded in exposing and destroying the pineal gland in young guinea-pigs. One of the animals survived the operation for two weeks in excellent health, when he died, apparently from a small abscess. Excepting a failure to grow as fast as the control in the same cage, he showed no evident disability of any kind.

Feeding Experiments in Animals.—1. Of 8 half-grown guinea-pigs, well fed, under observation for five weeks, 4 received intraperitoneal injections, three times a week, of pineal nucleoproteid, and 4 were kept as controls. The controls gained 25 per cent. in weight; the subjects gained 36 per cent. The difference was perceptible to the eye, and the subjects could be picked out by persons not knowing which had been injected. 2. Of 12 small kittens, 6 were fed on calf's pineal, and 6 kept as controls. The subjects outgrew the controls rapidly in activity, size, intelligence, and resistance to intercurrent disease. The medication for the subjects was fresh gland—one calf's gland apiece per day, or 30 minims of a standardized solution of nucleoproteid in the milk. 3. Of 12 baby guinea-pigs, laboratory-bred, 6 were fed for four months on pineal capsules and 6 kept as controls. The subjects increased in weight (average of 5 surviving) 325 per cent.; the controls increased in weight (average of 4 surviving) 250 per cent. 4. Ten small rabbits were under observation for five months. The 5 subjects were fed on "capsules." One died. The 4 survivors gained, on an average, 1442.5 Gm. per rabbit, while the 3 surviving controls showed an average gain of 1074 Gm.

Therapeutic Experiments in Human Beings.—After various unsatisfactory methods of dosage, a physiologic dose was adopted, the attempt being made to estimate the actual work that one gland could do instead of its mere weight. The method was as follows: Twelve bullocks' pineals, perfectly fresh, are rubbed up with a suitable amount of milk-sugar till extinguished. The mass thus obtained, after thorough drying, is distributed into one hundred capsules. Each corresponds to 150 pounds of live bullock. From the total of about 50 children treated with the pineal preparation the authors conclude that in certain cases of retarded development in children, pineal gland may be a remedy of value. In cases of total idiocy and gross physical defect, however, they found the gland useless. In proportion as the patient was less characterized by physical stigmata, so much more benefit did he seem to reap from pineal medication. Whether there be any specific mental defect of childhood which may be called *apinealism* or *hypopinealism*

remains for the future to decide. There is, however, no question that the gland is of benefit in many cases of simple retardation, and even in such specific diseases as Mongolism. In one series of children the *physical advance* was more marked in the control cases than in the subjects—while the subjects advanced considerably more rapidly than the controls in mental accomplishment. It seems natural to suppose that given the existence in each subject of only a certain *quantum* of energy, the more this is deflected to mental lines of development, the less will be left for physical growth.

As a group, 21 subjects gained 2.23 points *mentally*. Of the 14 who gained, the average mental gain was 3.35 points. The 14 controls gained as a group only 1.35 points mentally. Of the 9 who gained, the average mental gain was 2.11 points. *Physically,* the gain in the standing height for the 21 subjects averaged 18.52 mm.; for the 14 controls, 24 mm. In weight the 21 subjects gained an average of 2.06 kg.; the 14 controls, 2.89 kg. In grip of the right hand the 21 subjects gained an average of 0.9 kg. as a group, and the 12 who gained averaged 1.58 kg. each. The 14 controls gained an average of 3.43 kg., the 10 who gained averaging 4.8 kg. each.

HYPOPITUITARISM, WITH REPORT OF A CASE.*

By T. J. BILLION, M.D.,

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A FUNCTIONAL classification is inadequate fully to describe the clinical conditions in pituitary disease. Cushing, in his monograph, classifies the states of "dyspituitarism" under five clinical groups: (1) Cases in which not only the signs indicating distortion of the neighboring structures, but also the symptoms betraying the effects of altered glandular activity, are outspoken. (2) Cases in which the neighborhood manifestations are pronounced, but the glandular symptoms are absent or inconspicuous. (3) Cases in which neighborhood manifestations are absent or inconspicuous, though glandular symptoms are pronounced and unmistakable. (4) Cases in which obvious distant cerebral lesions are accompanied by symptomatic indications of secondary pituitary involvement. (5) Cases with a polyglandular syndrome, in which the functional disturbances on the part of the hypophysis are merely one, and not a predominating, feature of a general involvement of the ductless glands. Cases in the first four groups vary, depending on whether symptoms of a hyperpituitarism, a hypopituitarism, or a mixture of the two predominate.

The case which the author describes is one of hypopituitarism of the third group. The patient is aged 25, married, and a Hollander. She is subject to recurring attacks of quinsy. She menstruated regularly until 21, when she

* Summary of article in the Journal-Lancet, November 15, 1913.

became irregular; she has not menstruated in the past two years since coming to this country. This is also the duration of her married life, and during this time she has had no sexual desire or feeling. Dizziness is the only subjective

Patient at 18 years. In good health.

Patient at 23 years. Note the acquired mandibular prognathism.

symptom. She now weighs 170 pounds, is 5 feet 4 inches high, and has become very fleshy in the last five years. There is now mandibular prognathism. The skin is thickened, dry, and inelastic. Hair is very scanty about the genitals

Patient's hand. Note the tufted phalanges, the exostoses, and the altered epiphyseal junctions; also the square hand and stubby fingers.

and under the arms. Temperature, 97° F. Blood-pressure, 100 mm.; sugar tolerance, 300 Gm.,—all the patient's stomach would tolerate. There is also an undoubted reversion sexually. The hand is that of an acromegalic, with the tufted phalangeal tips and exostoses, the short, thick, stubby fingers, and square hand. There was probably a hyperpituitarism after the age of 18; this shortly after reversed its functional character. The visual field in this patient is normal, and there is no evidence of other neighborhood symptoms. Under pituitary extract, 3 grains a day, the dizziness soon disappeared.

SURGICAL TREATMENT OF HYPERTHYROIDISM.*

By CHARLES NOOTNAGEL, M.D.,

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In order to minimize hemorrhage during the excision of part of the thyroid gland, the author first ligates the superior and then the inferior thyroid arteries in the following manner: After dislocating the gland from its bed, he elevates the apex of the gland on his index finger, locates the superior thyroid artery by palpation, passes a curved round needle, armed with a ligature, around the apex, and ties the vessels and gland *en masse*. Then he introduces the index finger under the outer lower edge of the gland, turns this over as far as possible, locates the primary branches of the inferior thyroid artery by palpation or sight, passes a curved round needle, armed with a ligature, deeply through the thyroid gland from one side of these primary branches to the other, and ligates vessels and gland tissue *en masse*. This avoids the recurrent laryngeal nerve absolutely, insures an almost bloodless excision, and permits of leaving in the posterior third of the gland with its all-important parathyroids.

In order to insure a good cosmetic result, the platysma, fat, and fascia are united carefully by a running suture introduced in the following manner: A round curved needle with ligature is passed through these tissues as usual and tied, and then the needle is carried from below these tissues up to the skin, emerging just at its edge. Next the needle is again carried to the bottom of the wound on the opposite side, going up through the tissues and emerging again at edge of skin. This is repeated until the entire wound is closed. Then the skin is sewed by a continuous overcast stitch, two layers of gauze applied over the entire incision and saturated with collodion, and a thick gauze dressing applied while the collodion is still fluid. The above stitch holds the superficial tissues in better and closer apposition and relieves the strain on the skin suture. The collodion acts as a splint and holds the edges of the skin absolutely quiescent during the time of healing. Ten days after operation the dressing should be removed.

* Summary of article in the Journal-Lancet, August 1, 1913.

Iodized catgut is used throughout the operation. Drainage through a stab-wound should be used after every excision for hyperthyroidism. The edges of the fibroid capsule should be brought together by a running suture over the raw glandular surface except at its very lowest point, where the drainage-tube should enter. Where the drainage-tube emerges from the skin a separate dressing should be applied, so that it can be changed at any time when it becomes saturated with wound secretion without disturbing the dressing over the original incision.

The author purposely omits reference to excision of part of one lobe and tying of the other superior thyroid artery as the operation of choice, because when one whole diseased gland is left, hyperplastic growth may continue in this more easily than would be the case if part of it had also been removed. The additional time consumed in excising part of the second gland after tying its superior artery would be so short as to become negligible.

Abstracts from Current Literature on the Internal Secretions

Glycosuria and the Ductless Glands.—*Pancreatic Glycosuria:* The author refers to the case of a woman admitted to a hospital three years before for diabetes, who returned with all the signs of obstruction of the common bile-duct and the pancreatic duct. As she was 60 years of age, he suspected new growth of the head of the pancreas, but under treatment the obstruction disappeared, though the glycosuria persisted. This and similar cases suggest that diabetes may have a pancreatic origin even though there be no evidence of disease of the gland at the time the glycosuria is observed. Systematic use of the tests for pancreatic insufficiency will in future permit of recognizing more of such cases.

Adrenal Glycosuria: Injections of epinephrin are known to excite glycosuria. Von Noorden regards the chromaffin system as antagonistic to the pancreas in regard to sugar metabolism, and this antagonism has been used by Loewi as a test for pancreatic disease. Normally the instillation of a few drops of epinephrin solution into the conjunctival sac does not dilate the pupil, but if there is pancreatic inadequacy it does so in about twenty minutes, the normal balance between the internal secretions of the pancreas and adrenals being disturbed. This may also prove a help in determining whether or not a given case of diabetes is of pancreatic origin. The author finds the chief drawback to the test, that it is too sensitive. The pancreas may be only secondarily involved, and yet the test be positive. Thus in obstructive jaundice he found the test positive, and concluded that the obstruction originated in the pan-

creas; but the post-mortem revealed primary new growth in the liver, while there was merely a secondary pancreatitis.

Chronic overaction of the adrenals may afford an explanation of the frequent association of glycosuria with high tension in men in later middle life, for both these conditions can be produced by excess of epinephrin.

Thyroid Glycosuria: Thyroid extract can excite glycosuria. Myxedema is associated with increased sugar tolerance, while in Graves's disease sugar tolerance is lowered, and there may be actual glycosuria. Hence the myxedematous patient becomes stout, while the sufferer from exophthalmic goiter emaciates. But even in myxedema the administration of thyroid extract may cause glycosuria. Garrod found it in 4 out of 11 cases. The proper dose of thyroid extract in myxedema is one which does not lower sugar tolerance appreciably below the normal. The drug is not suitable for the treatment of obesity, as it may convert a latent into an active glycosuria; many stout subjects are on the verge of glycosuria. According to von Noorden, the internal secretion of the pancreas is inhibited by the thyroid; hence the glycosuria which follows thyroid excess.

Pituitary Glycosuria: In the active stage of acromegaly there is always lowered sugar tolerance, and frank glycosuria has been found in more than one-third of the cases. But with the progress of the disease the posterior lobe is destroyed, and the sugar tolerance rises, while the blood-pressure falls as less pressor substances are produced. In the earlier stages Humphry and Dixon have found pressor bodies in the urine. The development of the exaggerated sugar tolerance may be delayed by the compensatory enlargement of the thyroid which not infrequently occurs. The greatly increased sugar tolerance is one factor in inducing the obesity in Fröhlich's syndrome or primary hypopituitarism. Cushing and others advise the administration of pituitary extracts in Fröhlich's syndrome, and suggest that the appropriate dose can be determined by seeing what amount is necessary to reduce sugar tolerance to its normal level. W. Langdon Brown (Clinical Journal, October 1, 1913).

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Physiologic Properties of Lipoids Obtained from the Adrenals.—The author extracted from the cortical portion of the adrenals a lipoid insoluble in acetone, soluble with difficulty in benzol, partially soluble in alcohol, and soluble in chloroform, alcohol-ether mixture, and petroleum ether. Experimentally, this lipoid was found to excite, strongly, the adrenal cortex and, slightly, the kidneys and liver. It is devoid of action on the heart, but has a very distinct exciting action on the pilous system. When the substance was injected subcutaneously in oily solution into man in doses of 0.02 to 0.05 Gm. (⅓ to ⅘ grain), three changes were noted: 1. Increase in the pulse rate from 70 to 90 or more in the two or three hours following the injection, with simultaneous fall in blood-pressure. These two phenomena are parallel, and disappear in a few hours. 2. In 60 per cent. of instances, profuse sweating, lasting several

hours, sometimes a whole day, and especially pronounced at night. 3. Where the drug is injected in a daily dose of only 0.01 to 0.02 Gm. (⅙ to ⅓ grain), increased physical vigor and a sensation of well-being. H. Iscovesco (Société de Biologie, Paris, December 6, 1913; Semaine médicale, December 17, 1913).

The same observer extracted from the medullary portion of the adrenals a lipoid which, injected for about sixty days into rabbits, exerted a pronounced exciting effect on the heart, which became hypertrophied as a result. The substance also stimulates the medulla of the adrenals. Injected into man in daily doses of 0.02 to 0.03 Gm. (⅓ to ½ grain) it causes slowing of the heart rate, increased blood-pressure, and augmented capacity for work. The properties of this lipoid, differing from those of that previously described and obtained from the adrenal cortex, lead the author to suggest that in Addison's disease the asthenia and cardiovascular disturbances are due to destructive lesions of the medullary portions of the adrenals, and that the pigmentation and cutaneous changes are due to irritation, primary or secondary, of the cortices of these glands. H. Iscovesco (Société de Biologie, Paris, December 13 and 20, 1913; Semaine médicale, January 7, 1914). [*Cf.* with summary of article by Voegtlin and Macht, in this issue. Ed.]

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Pituitary Medication.—The good effects of pituitary extract usually seen during the first few days of its use are lost if the administration be prolonged, and likewise often cease with its discontinuance.

Infundibulin stimulates the unstriped muscle of the dilator iridis, and also that of the bladder, uterus, gall-bladder, and intestine. Experimentally, pituitary extract causes hyperadrenalism; in very large doses, hypothyroidism and thyroid atrophy. It also excites the secretion of the pituitary itself. It overcomes the tetany that follows parathyroidectomy. Castration in both sexes causes pituitary hypertrophy; so also does extirpation of the adrenals.

Therapeutically, pituitary extract has usually done good in increasing the force of the heart muscle, raising arterial tension, provoking diuresis, and improving the appetite. It has proved beneficial in the hyperthyroidism of pregnancy, menstruation, and the menopause, and in the tachycardia and tremor of Graves's disease. Given with extract of ovary or testis and thyroid, it has sometimes proven useful in genital insufficiency and myxedema as well as in hypoadrenalism. It is contraindicated in hyperadrenalism and high arterial tension. It relieves some symptoms of paralysis agitans, but not its rigidity. Combined with ovarian extract, it was useful in 2 cases of myasthenia gravis. It has, occasionally, diminished the aprosexia of adenoids, even without operation.

The author gives in adults a daily dose of 0.1 to 0.3 or 0.5 Gm. (1½ to 7½ grains) of the dried whole gland extract of ox, calf, or pig, or 0.1 to 0.4 Gm. (1½ to 6 grains) of the infundibular extract; to a child, ⅓ or ¼ of the adult dose is given, according to age. He gives cachets

of 0.1 Gm. each, preferably during meals. For obstetric use, he injects 1 to 4 c.c. (15 to 60 minims) into the glutei muscles. Thaon advises avoidance of pituitary extract if the kidneys be not normal, and Cushing states that the extract contains a depressor substance as well as a pressor, but Rénon and Delille, and others who have used pituitary extract extensively, have never seen any bad results from it. The author has found it useful during convalescence from acute infectious diseases. Lagane (Presse médicale; Charlotte Medical Journal, November, 1913).

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Paralysis Agitans and the Ductless Glands.—Parkinson's disease, the author points out, has been witnessed in association with myxedema, exophthalmic goiter, and scleroderma. Pathologic changes in the thyroid, parathyroids, and pituitary have been detected in this disease, and administration of preparations of these organs at times yields benefit in the same disorder. Paralysis agitans may thus be looked upon as a dystrophy of the internal secretions the result of endogenous intoxication, which, in turn, must react on some particular region of the nervous centers. On the whole, the symptomatology of the disease resolves itself into a single disturbance, viz., exaggerated muscular tone. Since physiologists now locate the center presiding over muscular tonicity in the subthalamic region, at the *locus niger* of Sömmering, and at autopsies in cases of Parkinson's disease circumscribed lesions, such as cysts, tuberculomas, and tumors, have been found in this very situation, the author is inclined to accept the view that the endointoxication of paralysis agitans exerts its effects here, just as that of exophthalmic goiter, he says, acts on the restiform bodies. As to the manner in which the intoxication affects the nervous structures, the author points out that thyroparathyroid insufficiency causes loss of calcium from the organism and its deficient assimilation. Calcium is known to be a sedative to the nervous and muscular systems, and there results therefore from the decalcification in paralysis agitans nervous excitation, whence naturally follows increased muscular tone. Studies of the urine in cases of Parkinson's disease by the author, as well as observation of various clinical manifestations, especially those referable to the bones and joints, confirmed the existence of decalcification in this affection. The treatment indicated, therefore, includes both thyroparathyroid organotherapy, and recalcification by the administration of calcium chloride. In cases reported by the author excellent results were thus procured. J. Gauthier (Thèse de Lyon, 1913; Gazette médicale de Nantes, December 20, 1913).

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Physiologic Action of Pituitary Extract.—The authors report experimental work in dogs. An extract of the posterior lobe, pituitrin, was used. Intravenous injection of this preparation causes a moderate rise in blood-pressure, slowing of the pulse rate, and a temporary arrest of the urinary excretion, without true secondary polyuria. The rise in

blood-pressure is more marked when the normal tonic activity of the vagi has been suspended or the terminations of this nerve paralyzed. It is due to a visceral and peripheral vasoconstriction, which appears to occur independently of the general vasomotor center. The slowing of the pulse rate caused by pituitrin ceases when the vagi are cut or their terminations paralyzed with atropine; conversely the tachycardia brought on by either of these procedures disappears under the influence of the pituitary preparation. Pituitrin weakens and slows the isolated heart.

The diminution of urinary excretion produced by pituitrin is dependent upon a renal vasoconstriction which seems to be of peripheral origin. Theocin sodium acetate acts in the dog in a manner opposite to pituitrin. It accelerates the heart rate, does not raise the blood-pressure, and causes renal vasodilatation with copious diuresis

In the entire animal the action of epinephrin is exerted in the same direction as that of pituitrin, but is more powerful and also more evanescent. It differs from pituitrin in increasing the amplitude of and accelerating the contractions of the isolated heart; it contracts the vessels and suspends urinary secretion in the isolated kidney. L. Beco and L. L. Plumier (Bulletin de l'Académie royale de Médecine de Belgique, vol. xxvii, No. 5, 1913).

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Exophthalmic Goiter in Cases of Syphilis.—Among the numerous infections that may bring on symptoms of Basedow's disease, syphilis is one of the most important from the practical standpoint, in view of the favorable effects obtainable with specific treatment in such cases. Hischmann observed in Gaucher's clinic the case of a girl of 19 years, with syphilis of six months' standing, in whom, after treatment for secondary manifestations had been given, rather suddenly developed a swelling in the central and lower portions of the neck, especially on the right side. The swelling rapidly increased in size, and became both painful and tender. There was no exophthalmos, but slight tremor and tachycardia (120 per minute). The patient also complained of mild attacks of epistaxis, of frequent sensations of heat and profuse perspiration. Under the influence of injections of mercury benzoate and of potassium iodide, these phenomena almost completely disappeared.

As Gaucher and Lévy-Fränkel have shown, the Basedow syndrome may be observed in the secondary stage of syphilis, when it is frequently preceded by specific buccopharyngeal ulcerations. Its onset is generally insidious, the earliest sign being usually tachycardia, less often thyroid enlargement. Clinically, there is no means of distinguishing it from exophthalmic goiter dependent on any other cause, except the efficacious action of mercury and iodide, which constitutes the sole argument in favor of its being essentially syphilitic in nature. Potassium iodide, indeed, often badly borne by Basedow cases, here exerts a favorable effect. G. Milian (Paris médical, September 20, 1913).

Surgical Treatment of Pituitary Disease.—From the operative standpoint the author divides enlargements of the hypophysis into three groups: (1) Intrasellar solid tumors; (2) solid tumors, intracranial in development, and (3) enlargements constituted by a single cyst. Before operation it is not possible to distinguish whether a cystic enlargement exists or not. One can ascertain with certainty, however, whether it is intrasellar or endocranial. The chiasm is separated from the hypophysis by a deep subarachnoid space, the cisterna of the chiasm. If the pituitary tumor grows so as to emerge above the sella turcica, it will fill up the cisterna and exert pressure upon the chiasm, whereas exclusively intrasellar tumors will cause no ocular disturbance. The author's operation for pituitary tumor involves submucous resection of the septum, the separation of tissue being extended to the intrasphenoidal septum; of 37 cases operated by this route, only 5 ended fatally. Some patients, almost blind at the time of operation, were able to resume their previous occupations; others with disturbed intellection and loss of memory were restored to a normal mental state by the intervention. The degree of benefit obtainable depends upon the nature and size of the tumor and upon the capacity of the optic nerves for repair after the period of compression. The most favorable prognosis is offered in intrasellar cysts of the pituitary. Hirsch (Proceedings of the Seventeenth International Medical Congress; Revue hebdomadaire de laryngologie, d'otologie, et de rhinologie, December 20, 1913).

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Effect of the Spleen and of Splenic Extract upon Malignant Growths.—The spleen is almost as efficient as the bone-marrow as a site of formation for antibodies, and agglutinins can be demonstrated in the spleen earlier than in the blood. Braunstein obtained good results by removing the spleen from mice with cancer and injecting an extract of the spleen in salt solution into other mice similarly affected. Six of the 15 mice injected died, but 5 of the remainder showed recession of the tumor. The spleen from mice repeatedly injected intraperitoneally with carcinoma and sarcoma extract was injected into 45 cancer-mice, with death in 3, recession of the growth in 6, and arrest of growth in 3. Of 7 sarcoma-rats similarly tested, 6 showed regression. Braunstein's conclusions were that the spleen possesses a highly developed power of resistance against tumor growth, while, on the contrary, splenectomized animals are more liable than normal animals to the inroads of malignant growth. Rohdenberg and Johnston made parallel observations upon the thymus, pancreas, spleen, hypophysis, and testes, showing that after extirpation of the thyroid, thymus, or testes the animal had a lessened resistance to carcinoma. The experiments of the authors support the views of Braunstein. They noted a comparatively more rapid growth of tumors in animals previously splenectomized. The results with splenic extract showed that it contained antibodies, while blood removed at the same time failed to show the same qualities.

Oser and Pribram (Zeitschrift für experimentelle Pathologie und Therapie, January, 1913).

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Danger Attending the Use of Epinephrin in Light Chloroform Anesthesia. — Levy, in experiments on cats under deep chloroform narcosis, had found that if a small dose of epinephrin hydrochloride solution is injected into a vein, there occurs a well-marked rise of blood-pressure, later followed by marked irregularity of the heart. If the same injection be made, however, into an animal under light chloroform anesthesia the resulting action is more intense, in fact almost invariably fatal, death being due to ventricular fibrillation. Levy had observed a similar action in man, the effects of epinephrin in a lightly chloroformed subject being acceleration of pulse with raised tension, then still greater frequency, with the pulse less readily felt and sometimes perceptibly irregular at the wrist. A few temporary pauses may be noted, and then the heart suddenly ceases beating; the pupils dilate widely, intense pallor supervenes, and cessation of respiration usually follows. In a few cases a fatal termination resulted.

The author of the present paper reports sudden death from stoppage of the heart as result of the injection of 5 minims of a 1 : 1000 solution of epinephrin in the nose of a patient who had been anesthetized with chloroform. At the time of the injection anesthesia was light, the corneal reflex being brisk, and no more chloroform was given. All attempts to resuscitate the heart failed. H. T. Depree (British Medical Journal, April 26, 1913).

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Adrenal Insufficiency and Susceptibility to Poisons.—The authors had shown that animals with adrenal insufficiency are more sensitive to intoxication by curare and strychnine than normal animals. In recent studies conducted for the purpose of finding out the reason for this difference they were led to conclude as follows: The large number of poisons that are more active in decapsulated animals indicates that the favorable influence of the adrenals is not exerted through specific neutralization by it of all these different substances. The difference between the lethal dose of a given poison in normal and in decapsulated animals is distinct, but not great; it would be more marked were there a specific process of neutralization in the normal animal. Moreover, adrenal extracts and epinephrin fail to neutralize or even diminish the toxicity of strychnine or curare, either *in vitro* or *in vivo*. In fact, a mixture of epinephrin and strychnine is more toxic than strychnine alone. The increased susceptibility of decapsulated animals to poisons is probably due to a general disturbance in the circulation, blood-pressure, vasomotor function, secretions, and elimination. Such conditions favor the absorption and fixation of poisons, and hinder their excretion. J. Camus and R. Porak (Société de Biologie, Paris, June 21, 1913; Médecine pratique, July, 1913).

Quinine in Exophthalmic Goiter.—Cases of Graves's disease improved by the administration, for several months, of 20 to 30 Gm. (5 to 8 drams) of quinine divided between twenty days in each month, are reported by the author. No untoward effects whatever were observed. In the absence of a specific remedy for exophthalmic goiter, the rôle of the sympathetic system in the production of the various manifestations of this disease, whether it be considered the *primum movens* in the condition or held to be altered secondarily—organically or functionally—through a modification in the thyroid secretion, is sufficiently important, in the author's estimation, to justify the institution of treatment intended to counteract its (the sympathetic) disturbance. While surgical treatment of the sympathetic seems to have yielded successful results in many cases, medical treatment directed to the same end and consisting in the administration of quinine salts seems worthy of trial in a large proportion of cases, in view of (1) its frequent efficacy; (2) its ease of application, and (3) the tolerance to this drug exhibited by patients with Graves's disease—a tolerance rather remarkable in cases that almost constantly present pronounced gastrointestinal disturbances. R. Gaultier (Société de Thérapeutique, Paris; Presse médicale, December 13, 1913).

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Thyroid and Testicular Treatment in a Case of Chronic Rheumatism and Psoriasis.—The author reports the case of a man of 72 in whom severe pruriginous psoriasis and mild chronic rheumatism had come on slowly in a period of seven or eight years after emotional distress, due to the loss of three children. The rheumatism was worst in winter; the psoriasis, in summer. The itching from the latter condition was continuous and prevented sleep. The circinate character of the lesions suggested the possibility of syphilis, but the Wassermann reaction was negative. Signs of hypothyroidism being present, the writer prescribed thyroid cachets, of 0.025 Gm. (⅔ grain) each, with rapid benefit to the rheumatism, but none to the psoriasis. As the patient showed breasts of a somewhat feminine type, with sexual frigidity of six years' duration, and also hypotrichosis, the writer, remembering that the testis is rich in sulphur (Brisson) and has a marked action on the skin, prescribed cachets of testicular powder—one of 0.2 Gm. (3 grains) daily—with rapid benefit to the itching and psoriasis, and return of sleep. Léopold-Lévi (Comptes-rendus de la Société de Biologie, June 6, 1913).

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Tumor of the Hypophysis.—Report of a case upon which was performed a frontal craniotomy for tumor of the hypophysis with threatened blindness. The patient was a man of 31 who had been treated for some eye trouble for two years, until it was recognized that he had a temporal hemianopsia. When the patient was admitted to a special institution, he had only slight light perception in the nasal side of the right eye, and complete temporal hemianopsia on the left side. With the X-rays the sella turcica was found much enlarged. The hypophysis was exposed

by the transfrontal route, as described by Frazier, and an excellent exposure of the sella turcica and contents obtained. The hypophysis was the site of a large tumor, of which a part was removed with a sharp spoon. Convalescence from the operation was uneventful. Improvement in the left eye was noticed by the patient on the day after the operation, and steadily continued. The last perimetric charts showed a marked increase in the field of the left eye for all colors. Elsberg (Medical Record, July 26, 1913).

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Uses of Ovarian Extract.—The author points out that in some forms of dysmenorrhea, a condition which he attributes to a mild degree of hyperthyroidism, ovarian extract is of great value. It was also found useful in lactation, atrophy of the uterus, and in the flushes of the climacteric period, natural or artificial, especially if administration is begun early. In anemias, including genuine chlorosis, it also served well. Combinations of iron, arsenic, and ovarian extract are particularly useful in such cases; wherever iron is indicated the author gives ovarian extract with it. In amenorrhea, relative or absolute, he has found ovarian preparations the best remedy. They produce no untoward results and the main contraindication consists of profuse bleeding. He often combines ovarian extract with thyroid, especially to promote metabolism and encourage oxidation. The annoying symptoms sometimes produced by thyroid are often greatly diminished by the addition of ovarian extract. S. Wyllis Bandler (Archives of Diagnosis, January, 1913).

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Treatment of Postoperative Retention of Urine.—Pituitary extract employed in 21 puerperal and 24 postoperative cases of retention of urine with excellent results. By its use the author was always able to avoid catheterization. The injections were given deeply into the muscles. It was found that they are best given when the bladder is fairly full, and the patient distinctly feels the necessity of having it emptied. Injection of pituitrin is then almost always followed in five to ten minutes by an increased desire to micturate, which usually ends in a spontaneous evacuation of the bladder. Occasionally, however, this result is not obtained until after a few hours. If an injection is given when the bladder is only about half-full, the action is less marked, though distinctly noticeable; if the bladder is empty, there is no effect whatever. When once a voluntary evacuation had been secured, it was seldom necessary to repeat the injection, viz., in only 8 out of 45 cases. Ebeler (Zeitschrift für gynäkologische Urologie, Bd. iv, S. 55, 1913).

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Acute Pneumococcic Suppurative Thymitis.—The author reports pathologic data concerning the thymus of a child that succumbed suddenly with asphyxic symptoms. The entire center of the organ was occupied by an abscess, which emptied itself as soon as it was entered. The pus contained pneumococci. The abscess walls showed, internally,

marked inflammation, with round-cell infiltration; externally, practically normal thymus tissue, without fibrosis or fatty degeneration. The condition can thus be considered one of insidiously developing acute thymitis with abscess formation. Demme has reported a similar case in a child 2½ months old who died in three hours, with signs of asphyxia; the autopsy showed total suppuration of the thymus without any ascertainable portal of entry of the infection. H. Audeoud (Revue médicale de la Suisse romande, December, 1913).

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Precocity in a Case of Pineal Tumor.—The author reports the case of an infant who, at the age of 4 months, developed, first, hydrocephalus with spastic paresis. The hydrocephalus soon ceased to increase, but the child remained backward mentally, whereas, physically, an abnormally rapid development took place. At 18 months the pubis became covered with hair, the genitals developed to an exaggerated extent, and the voice changed. This syndrome is characteristic of pineal tumors, as illustrated in the case reported by Raymond and Claude in which confirmation by autopsy was obtained. The X-ray examination in the author's case afforded ground for believing that a pineal tumor was actually present. Van der Heide (Dutch Pediatric Society, Groningen, July 17, 1913; Bulletin médical, August 6, 1913).

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Function of the Spleen in the Infection of Albino Mice with Bacillus Tuberculosis.—Infection of rats and mice with tuberculosis (bovine type) develops a splenic tumor as a typical lesion. Removal of the spleen from mice greatly increases their resistance to the infection. This increased resistance cannot be explained at present. The infection in the splenectomized mice tends to remain localized as contrasted with an almost septicemic type of disease which is usual in the normal animal. The animals of each group that live more than thirty days are apt to present typical exudative lesions. The removal of the spleen does not therefore grossly change what may be called the capacity of the body for exudation. P. A. Lewis and A. G. Margot (Journal of Experimental Medicine, February, 1914).

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The Sella Turcica in Some Epileptics.—The circulatory disorders in epilepsy, shown frequently in slow pulse, vasomotor stasis in the extremities, and an invariably low blood-pressure when arteriosclerosis is not advanced, the tendency to obesity, and a ravenous appetite, might make one pause before excluding the possibility that there may be some association between epilepsy and a marked disturbance of the pituitary body, and suggest that it might ultimately be found that pituitary disease may sometimes have more or less bearing on some types of epilepsy in some of its broader and more general manifestations. L. Pierce Clark and E. W. Caldwell (Journal of the American Medical Association, January 3, 1914).

Effects of Thymectomy in Chicks.—The author removed the thymus from chicks 4 or 5 days old. The chicks recovered readily from the operation when placed in the incubator for twenty-four to forty-eight hours and suitably fed. Three out of 6 operated chicks were living three months after the operation. The effects noted were a slightly more rapid increase in weight than in the controls, superficial trophic disturbances (dull plumage and comb), subnormal size of the testes, and a lessened resistance to intercurrent infections. In birds leaving the egg in a less advanced state of development than the chick, *e.g.,* the pigeon, possibly more marked disturbances, comparable with those resulting from thymectomy in puppies, might be observed. Coutière (Bulletin de l'Académie de Médecine, Paris, October 28, 1913).

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Epinephrin in Postanesthetic Vomiting.—When the vomitus in postoperative emesis is of the hemorrhagic type, the author administers by the mouth, in addition to carrying out other measures, 5 to 10 minims (0.3 to 0.6 c.c.) of a 1:1000 solution of epinephrin hydrochloride in a teaspoonful of water. The blood in the stomach is likely to have been the result of engorgement of the gastric vessels during the employment of the Trendelenburg position, the vessels subsequently rupturing under the stress of retching. In a series of cases, after washing out of the stomach contents with saline draughts, the passage of blood into the stomach was found to be arrested by the administration of epinephrin, and cessation of the vomiting promptly followed. Keay (Edinburgh Medical Journal; Charlotte Medical Journal, October, 1913).

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The Thyroid in Pregnancy.—The authors report a study of the thyroid in 1586 cases of pregnancy. Of 852 primiparæ, 83 showed thyroid enlargement, and of 734 multiparæ, 49. The general average was 8.3 per cent. In 8 cases varying degrees of hyperthyroidism were present; in 2 others it also probably existed in a mild degree. With but one exception the symptoms of hyperthyroidism practically disappeared within two weeks after delivery, and in the 1 case forming exception they were diminished, later becoming more severe with the beginning of another pregnancy. The earliest onset of these goiters varies considerably; a large proportion, however, had first appeared during pregnancy. None required surgical interference. J. W. Markoe and L. W. Wing (Bulletin of the Lying-in Hospital of New York, June, 1913).

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Pathology of the Adrenals.—The author reports a case in which a tumor found in an adrenal was the only noticeable explanation for sudden death after a minor operation. The patient, a woman of 43, had a tendency to cardiac hypertrophy, high blood-pressure and glycosuria, and the tumor found in the adrenal may have been the primary cause of them all. The excessive functioning of the adrenal entailed by the tumor growth, consisting of chromaffin tissue, flooded the organism with epi-

nephrin and this rendered the heart, etc., so unstable that it was unable to resist even the slight shock of a minor operation. Conditions are similar to those in the thymolymphatic habitus, in which sudden death may occur from slight causes. Helly (Münchener medizinische Wochenschrift, August 19, 1913).

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Conjoint Thyroid and Renal Disturbances.—Thyroid disorders are frequently accompanied by slight functional disturbances of the kidneys. In many cases the renal disorder is quite clearly manifest, giving rise to polyuria and a pronounced increase in blood-pressure. The prognosis is not rendered less favorable, however, by such an accompaniment. The disturbance in the renal secretory function is probably dependent on or favored by the toxic and nervous influences arising because of the disorder of internal secretion. Histories of 5 illustrative cases are given. Jamin (Deutsche Zeitschrift für Nervenheilkunde, Nos. 47-48, 1913; Zentralblatt für innere Medizin, January 10, 1914).

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Effect of Removal of Certain Ductless Glands on the Growth of Sarcoma.—In experiments on dogs in which sarcoma had been artificially induced, the author found that the maximum growth of the tumors occurred in animals subjected either to thyroidectomy or castration, removal of these glands apparently favoring the development of the tumors. Degeneration and absorption of the tumor, on the other hand, occurred early and were particularly marked in dogs that had been both castrated and thyroidectomized. V. G. Korentchevsky (Rousky Vratch, May 4, 1913).

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Action of Prostatic Extract on Cerebral and Renal Circulation.—The authors found that intravenous injections of prostatic extract produce regularly an increase of the volume of the brain as well as a fall of arterial pressure, with or without slowing of the heart rate. The volume of the kidneys was generally lowered simultaneously with the fall of arterial pressure. The observations were made by the plethysmographic method. C. Dubois and L. Boulet (Comptes-rendus de la Société de Biologie, April 25, 1913).

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Metabolic Results of Administration of Desiccated Thyroid to Dementia Precox Patients.—The administration of desiccated thyroid to 4 patients with dementia precox caused: (1) An increase in the output of total urinary nitrogen; (2) an increase in the output of creatinin; (3) an increase in the output of indol-acetic acid. E. L. Rose (Archives of Internal Medicine, December, 1913).

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Action of Epinephrin on the Coronary Vessels.—Report of experimental work on dogs and cats confirming the view that epinephrin dilates the coronary vessels and accelerates and increases the circulation through them. Meyer (Berliner klinische Wochenschrift, May 19, 1913).

Department on General Medicine

Original Articles

DILATATION OF THE STOMACH COMPLICATING PULMONARY TUBERCULOSIS: ITS SYMPTOMS, DIAGNOSIS, AND TREATMENT.

By FRANK NEALL ROBINSON, M.D.,

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In obtaining a careful history in cases of pulmonary tuberculosis, it seems remarkable how many of the patients suffering from this disease complain of disturbances of digestion, varying in character, which have already existed for some time. The majority have been sufferers in this direction long before a diagnosis of the pulmonary affection had been made. Investigation of these symptoms is of such importance to the welfare of our patients that it behooves us all to examine with especial care the size and location, as well as the motor function, of the stomach in all cases of pulmonary tuberculosis coming under our supervision, and to watch carefully for the development of these symptoms, in those where no deviation is found, during the course of treatment. That dilatation with atony and loss of motility is the commonest variety of gastric disturbance to be met with in cases of pulmonary tuberculosis, those who will search carefully for it can easily convince themselves.

In a series of 265 cases of pulmonary tuberculosis under my care, I have found dilatation of the stomach to exist in 223 (85 per cent.); of these 223 cases, 134 (60 per cent.) gave a previous history, extending over several years, of symptoms referable to the stomach, such as belching and frequently recurring "bilious attacks," with vomiting, palpitation of the heart, and headache.

The number of males suffering from the affection was relatively as great as the number of females in whom the diagnosis could be made.

It is my firm belief that dilatation of the stomach plays an important rôle in the production of many symptoms seen in the tuberculous, and that its existence aggravates many more of the symptoms primarily of a tuberculous nature, by reason of the autointoxication taking place through the fermentation of the sugars and starches, or through the putrefaction of the meat, eggs, and milk, and no doubt as a result of both factors, operating simultaneously, in a large majority of cases. These conditions constitute an important agency in the increase in fever, and are also responsible for many of the secondary toxic symptoms, such as loss of appetite, extreme fatigability, nervousness, constipation, the marked matutinal depression complained of by many of these patients, as well as

albuminuria, headache, urticaria, and the thick, glutinous sputum occluding the bronchial tubes and provoking sibilant râles and harassing cough accompanied by vomiting. Many additional symptoms can easily be proved to depend on gastric dilatation by instituting the proper measures to overcome this condition, when most of the secondary symptoms will be seen to disappear and the remainder to become markedly lessened.

Etiology.—The causes of dilatation of the stomach are as numerous as those contributing to the pulmonary lesion. Some of the most important ones may be enumerated as follows: Irregular meals; leaving too short an interval between meals, and eating too much and too quickly. But the most important factor, to my mind, is a debility of the muscular wall of the stomach, which forms part of the general muscular debility of these patients. This is accompanied by degenerative changes in the gastric musculature, the result of fatty degeneration consecutive to inflammatory affections of the mucous membrane, these in turn being due to intemperance, alcoholic intoxication, and also to infectious diseases.

Symptoms.—The symptoms of this affection are so numerous and varied that for a proper understanding we must divide them into two classes: (1) Those referable directly to the digestive tract; (2) those purely toxic (from absorption).

Primary (*digestive*) *Symptoms.*—The appetite in these cases is either very good or entirely wanting, the patients complaining that they "can't get enough to eat," but feel badly after eating, or that "nothing looks good," and that it is simply the fact that they know they must eat that enables them to take food at all. There is no pain until from two to four hours after meals. These patients then become "puffed" and complain of pain in the epigastrium and around the umbilicus, this being accompanied either by belching gas, which may become fetid; or if the belching continues, by regurgitation of food, followed, in turn, by pyrosis, with a feeling of heaviness in the epigastrium. The bowels are for a long time constipated, but later the movements become soft, offensive, and acid in reaction. They are frequently expelled with pain, and large quantities of glairy mucus, yellow or white in color, are mixed with the feces in a majority of these cases.

Secondary (*toxic*) *Symptoms.*—Aches and pains (toxic myalgias and neuralgias), referred to the chest and right hypochondrium, are frequently complained of and often mistaken for attacks of pleurisy. One of the most distressing of the toxic symptoms with which one has to deal is the morning depression these patients suffer from, accompanied by headache and a feeling of anxiety, which remains with them for several hours. Insomnia frequently accompanies this disorder. The liver is invariably found enlarged in these cases, and the patients will complain of a feeling of weight or pain in the right hypochondrium. These patients also suffer from vertigo, especially on arising.

Reflex toxic symptoms involving the circulation, and referable to the skin, are frequent. Chief among these is a feeling of chilliness. When this appears it is often referred to by the patient as "fever coming on";

but when the temperature is taken, no rise is found. This symptom is seen generally about an hour after a meal.

Partial and fleeting edema of the face, hands, and feet, sometimes accompanied by itching, is observed. Flushing of the face, accompanied by a burning sensation, is a common symptom coming on from two to three hours after a meal and continuing for one-half to one hour. These patients are also subject to spells of perspiration, manifested more particularly about the neck, chest, and face, and coming on both at night and in the daytime, usually as soon as they fall asleep. Such patients are the ones who complain of catching cold easily.

Patients suffering from the gastric complications complain far more of dyspnea than do those presenting no symptoms in this direction. About 10 per cent. of my cases showed albuminuria, without other evidence of kidney complication. The albumin entirely disappeared when proper measures were instituted. It is in these cases of dilated stomach complicating pulmonary tuberculosis that one sees the so-called "tuberculous rheumatism" and painful joints. My histories show that 30 per cent. of the cases complained of painful joints.

Of the purely toxic nervous symptoms occurring in my cases, migraine, spinal irritation, and cerebrocardiac neuroses with hypochondriasis were the most frequent.

Diagnosis.—The physical procedures most useful in making a diagnosis of the affection are percussion and auscultation.

Percussion, as practised in endeavoring to outline the stomach, is a delicate manipulation, for one must be exceedingly careful to differentiate between the stomach tympany and that produced by the colon. To obviate this source of error, one should percuss from above downward, first determining the upper border of stomach tympany and marking it with a pencil, and then following that tympanitic note downward. The lower border can then usually be made out clearly. After the upper and lower limits of the stomach have been determined, the right and left border should be ascertained as well. These limits can be found by the same method of percussion, the right border being first determined and the same note then followed to its extreme limits on the left.

Auscultation, with the aim of eliciting a splashing sound, is of much greater importance than percussion, for the ear is thus brought into play, and by careful "clapotage" from above downward the lower border can be easily found and marked out. It is imperative that this sign be always looked for at least four to six hours after a meal; in fact, a fasting stomach—eight to ten hours after a meal—is best of all for this purpose. If splashing should not be heard on the first few strokes, one should not be misled into considering that the stomach is not dilated, for it may have become flattened out and lie behind the abdominal walls. If the patient is now required to drink a half-glassful of plain water, it will be found, if dilatation exists, that the splashing sound can immediately be elicited. It should not be forgotten that every stomach that is not retracted when it is empty is a dilated

stomach. Dilatation is not distention, but a *stretching* of the stomach, the cavity of which is apparent only when it is empty because, though its walls may touch each other, it is no longer capable of diminishing its own size by retraction.

If the true extent of the dilatation is to be ascertained, it is better then to inflate the stomach by having the patient drink a half-glassful of water in which has been dissolved a teaspoonful of sodium bicarbonate. After gentle massage of the region overlying the stomach, thoroughly to mix the soda solution with the stomach contents, the stomach area can be outlined once more by percussion before the few drops of hydrochloric acid are added. After the latter has been given, one should wait a few moments for the gas to form and inflate the stomach. Now the outline of the stomach should be made out while the patient is in the recumbent posture; then, the patient arising to his feet, the upper and lower border should be especially determined while he is in this position, for in this manner the full extent of the sagging of the organ can be shown.

Should one not be satisfied with the ordinary methods of diagnosis alone, recourse may be had to the bismuth meal and the X-ray, when a true, graphic picture of the extent of the displacement can be obtained.

Treatment.—The benefit afforded these patients by proper remedial measures is surprising. Not only are the digestive and toxic conditions removed, but the general condition soon responds to treatment, much improvement in the pulmonary tuberculous trouble becoming manifest. Sight should, of course, not be lost of the primary tuberculous affection, and tuberculin in some form—that best suited to the case—should be used, while at the same time treatment for the secondary (gastric) affection is being instituted.

Treatment of the dilated stomach as a complication of tuberculosis of the lungs consists of the use of mechanical, dietetic, medicinal, hydrotherapeutic, and hygienic measures. A combination of all these is necessary, one being as essential as the other, and the successful outcome of the treatment depends entirely on strict supervision by the physician and the hearty co-operation of the patient in carrying out the measures in detail.

Mechanical.—Support must be furnished to the stomach and to the flaccid abdominal wall, and my preference is to apply a Rose belt of Z O adhesive plaster or moleskin after so manipulating the organ as to raise it up. For this purpose I place the patient on his back, with the hips elevated on a firm, folded pillow. I never allow the straps to remain after they lose tension or become wrinkled, lest the skin be made sore, but remove them with benzine, wash the skin carefully with alcohol, and replace the straps, after carefully examining the position of the organ. As soon as the patient shows improvement I have a supporting belt made to fit him, and have him wear the belt night and day until there is a gain in weight, when I allow him to remove it at night, with the understanding that it is to be replaced in the morning before arising, while still in the recumbent position.

Dietetic.—Much depends on diet in the treatment of this affection, and, while the tuberculous condition must be taken into consideration, one must not forget that most depends, in this class of the tuberculous, on the careful nursing of a bad stomach for a favorable outcome of the pulmonary lesion. Secondary enteric infections must simultaneously be prevented, if possible. Several desiderata stand out prominently in this regard, and first among them, to my mind, is a dry diet, in the sense that no liquids are to be taken with meals or for two or two and one-half hours after. This is advisable for two reasons: (1) The increased bulk of stomach contents (for these patients are frequently drinking copiously of water with meals) by gravity helps to sag down the already dilated organ, as well as to decrease motility, which is already diminished in a large majority of instances; (2) there is superinduced a great reduction in the hydrochloric acid content which, in conjunction with the already impaired digestion, renders decompositions and fermentation much easier, with resulting formation of organic acids.

The feature of next importance in the treatment is to have at least ten hours between the heavy meals of the day. In this way the stomach is given opportunity to empty itself and then rest before another tax is thrown upon it. I order for the patient a good breakfast, make lunch a light meal, and then supply a good dinner at night. Another factor which I invariably insist on is absolute rest, and by this I mean lying down with an attempt to sleep (not lying down reading books, or talking), after each meal, for from one-half to one hour.

Alcoholic drinks of all kinds are interdicted in these cases, as they are badly borne, and aggravate both the gastric and pulmonary disorders. Neither is fresh bread allowed these patients, but stale bread, toast, or crust may be taken, as well as crackers made with hard dough. Fresh bread is a cause of considerable discomfort, owing to fermentation, in these cases, and I have found it necessary time and again, where I have attempted to allow the use of it, to order it discontinued on account of increased flatulence.

Medicinal.—The indications for medicinal treatment in these cases are twofold: (1) To supply to the stomach the necessary hydrochloric acid and pepsin to aid and hasten digestion; in fact, the hydrochloric acid must be added in sufficient quantities to prevent decomposition and fermentation; (2) to stimulate muscular tone and secretion, an indication met by the use of bitter stomachics, such as nux vomica, cinchona, quassia, etc.

The drugs answering these indications may be combined, and my favorite formula is:—

℞ *Tincturæ nucis vomicæ,*
Acidi hydrochlorici diluti .....āā f℥ss (15 c.c.).
Glyceriti pepsini ..... f℥iss (45 c.c.).
Aquæ menthæ piperitæ .....q. s. ad f℥iij (90 c.c.).
M. Sig.: One teaspoonful in a half-glassful of water after each meal.

This may be supplemented, if there is considerable flatulence, by the addition of chloroform water, 2 or 3 minims (0.13 or 0.2 c.c.) to the dose, until this symptom is overcome, when it should be discontinued from the prescription.

Hydrotherapeutic.—Cold shower or sponge baths to the entire body, with a needle bath to the abdomen, followed by a brisk rub with a Turkish towel until the skin reacts, the whole administered on arising in the morning, constitute a valuable adjunct, improving the tone of the entire body and thereby increasing functional activity in the organs.

In cases with enteric symptoms—mucous passages and flatus—I use Priessnitz compresses, made by ringing Turkish towels out in hot water. These are applied to the abdomen for a half-hour after meals, while the patient is resting. The hot towels are kept covered with a small blanket or piece of woolen material.

Hygienic.—Under this heading I refer in particular to alimentary hygiene, that is, to those measures ordered the patient which have as their objects the rapid digestion of food, and the prevention of the long delay of food in the stomach.

First among these is the thorough mastication of all the food. The patients must not alone chew it well, but must eat slowly. Another feature is total abstinence from worry during meals. Some patients have a habit of waiting until mealtime to do their fretting, and I invariably caution against fretting and worrying, especially during these periods.

No eating or drinking between meals is to be permitted, except as ordered. Raw egg may be allowed these cases between meals, when the stomach has shown sufficient recuperative power to handle them, but until this time nothing should be permitted during these intervals.

Orders must be given to avoid fats, particularly at first; later they may be allowed in sufficient quantity to supply the demands of the individual patient. There will be found some patients who, from habit or other causes, require more fat than the average, and these are the cases in which fats can be added to the diet earlier than would be advisable elsewhere.

Seldom does lavage have to be resorted to in these cases. Even where the occasion for it does appear to present, care should be taken to avoid it in cases with active pulmonary lesions and febrile temperature.

THE TREATMENT OF CONDITIONS EXHIBITING INDICANURIA.

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Indicanuria signifies the abnormal excretion in the urine of potassium indoxyl sulphate (indican). According to Jaffe, one finds, physiologically, in the twenty-four-hour urine, from 4½ to 19½ mg. of indican. In these quantities this body can hardly be determined by the usual tests. Indican is derived from indol (C_8H_7N); the nucleus of the indol group, tryptophan, is contained in proteids and converted into indol through the agency of putrefactive processes. The indol absorbed from the intestinal tract is not excreted as such; it is first oxidized to indoxyl (C_8H_6NOH)

and then combined with sulphuric acid, when it appears in the urine as the potassium or glycuronic acid salt of indoxyl sulphate. Indican has been found not only in the urine, but also in pleuritic exudates, in the fluid of abdominal cysts, and, recently, in the sweat.

While in a large majority of cases indicanuria is due to the absorption of indol from the intestinal tract (*intestinal* indicanuria), it may also be due to the extraintestinal formation and absorption of indol, *e.g.*, in fetid bronchitis, cavernous pulmonary tuberculosis, gangrene, retention of a dead fetus, abscess, etc. This latter type has been designated as the septic, or *extraintestinal,* type of indicanuria. The existence of such a type must be admitted, and August Hartman, Alexander Kellman, and others have availed themselves of the indicanuria in such cases for diagnostic purposes.

The existence of a third type of indicanuria, "*metabolic* indicanuria," due to some fault in metabolism, we do not acknowledge, because the experiments in which subcutaneous injection of oxalic acid or phloridzin was found to produce indicanuria have not been verified.

Indicanuria is not a disease; it is merely a symptom, as we shall try to prove—a very valuable one, if properly interpreted.

By far the largest number of indicanuria cases belong to the first group, that of *intestinal* indicanuria. The indoxyl derivatives *per se* are non-toxic; 0.01 Gm. of indol per kilogram of weight of animal must be injected to produce any toxic effect, and such a quantity is never formed within the intestinal tract. But other products of nitrogenous putrefaction which are formed along with indol in the course of intestinal putrefaction are toxic —ptomaines, leucomaines, phenol, cresol, and skatol—and, inasmuch as we possess no simple method of determining these latter products, we judge what we heretofore thought to indicate the degree of intestinal putrefaction by the more simple method of the indican test. As will be shown later, indicanuria implies increased intestinal putrefaction only in a small number of cases.

Personally, I have employed the Obermeyer test: One test-tubeful of urine is precipitated with a few drops of a 20 per cent. aqueous solution of basic lead acetate solution. Half a test-tubeful of the clear filtrate is gently shaken with an equal amount of the freshly prepared Obermeyer reagent. The latter is obtained by mixing with 50 c.c. of *fuming* hydrochloric acid (C. P., Merck) 6 drops of tincture of ferric chloride. One cubic centimeter of chloroform is then added and the mixture gently shaken again for two minutes. The chloroform, dissolving the indican, sinks to the bottom of the tube and presents a distinctly blue, even blackish blue, coloration if indican be present in abnormal quantities. Using always a twenty-four-hour urine specimen and the same proportions of chemicals, and taking into account the specific gravity of the urine, we are enabled to get a fair idea of the quantity of indican by the shade of blue obtained.

In the last two decades it has been the habit of innumerable authors to consider indicanuria the expression of gastrointestinal autointoxication, and to explain diseases which in former years had been termed neurasthenia

as manifestations of such intoxication. The actual foundations for this entire doctrine of intestinal autointoxication have not risen above the level of an hypothesis, in spite of brilliant speculations in which, especially, the French school has indulged. Realizing, even from my modest knowledge of the history of medicine, that "theories," in spite of their apparently brilliant foundations, have had to be altered quite frequently, or even entirely abandoned, with the progress of science, while "empirical facts" have remained true ever since the time of Hippocrates, I started, seven years ago, by routine examination for indican in every one of my hospital, as well as my ambulant, cases to gather "empirical facts" in this direction. As space and theme do not permit of an enumeration of these facts, I must refer the reader to my monograph on the subject,[1] based on the study of 2092 cases, with over 40,000 indican tests and over 100 laparotomies corroborating the diagnosis. After convincing myself that *neither constipation, hyperchlorhydria, nor diet per se* had anything to do with indicanuria, I was enabled to divide my cases into three groups: I. Cases showing indican constantly in their urine (*constant* indicanuria). II. Cases showing indican only temporarily (*transitory* indicanuria). III. Cases showing indican only in association with the clinical recurrence of obscure gastrointestinal symptoms, and in which, with the abatement of such symptoms, the indican disappeared (*cyclic* or *recurrent* indicanuria); this type is the most frequent one.

I. The cases of *constant indicanuria* showed either (*a*) constant progressive organic lesions somewhere in the gastrointestinal tract—tuberculous peritonitis, carcinoma of the cardia, of the pylorus, of the liver, of the colon, stricture of the rectum, diffuse peritonitis, etc.; (*b*) constant achlorhydria, nervous achlorhydria, or pernicious anemia, or (*c*) the earmarks of a hypoplastic constitution (hypoplasia).

In former repeated examinations of the feces for indol, I ascertained the fact that there is no necessary relation between indicanuria and fecal indol, for we had frequent occasion to convince ourselves that the feces contained excessive indol, while the urine showed no indican, or that the feces contained indol only in moderate amount, while the urine showed excessive indican. This fact proves that it is not alone the quantity of nitrogenous putrefactive substances in the intestinal tract which causes indicanuria, and that there must be some other reason for the entrance of this material into the circulation besides its mere overproduction within the intestinal tract. The experiments of Herter and Wakeman, which proved that the fresh mucosa of the gastrointestinal tract, as well as liver cells, kidney cells, muscle, and brain, has the power of forming such a firm combination with indol that it cannot be recovered on distillation, were recalled. This suggested the idea that it must be some lesion of the gastrointestinal mucosa which allows even the normal indol to enter the portal vein and appear in the urine as indican; that as long as the mucosa, which constitutes the first line of

[1] "Die Indicanurie," Urban und Schwarzenberg, Vienna, Austria.

defense against the enterotoxins, is in normal condition, one should find no indicanuria, and that as soon as this first line of defense is broken through, or so to speak "begins to leak," one should find indicanuria though the feces might contain only very moderate amounts of indol. In a practically experimental manner, I proved this in cases of gastroenteroanastomosis, appendectomy, enteroanastomosis, cholecystectomy, cholecystostomy, gastroanastomosis,—all of which showed indican in the urine from the first day of the operation up to the time when it could be assumed that the intestinal wall was healed. In abdominal, and especially in pelvic, operations in which adhesions had to be separated or the intestines extensively handled, the mechanical trauma was sufficient to produce indicanuria. Similar operations, in which, however, there had been little or no trauma to the bowel wall, did not give rise to it. In other words, *every lesion of the gastrointestinal mucosa,* of whatever nature, produced indicanuria: Simple lesions of the gastrointestinal mucosa are sufficient to cause absorption of the ever-present indol and subsequent indicanuria. This assumption is corroborated by the numerous reports of other authors who have found indicanuria present in the conditions already mentioned.

The indican excretion in these cases does not always imply increased nitrogenous putrefaction, for, once the first line of defense is broken, indican will appear in the urine even though only moderate amounts of indol may be present in the intestinal tract; these small quantities are absorbed by a *healthy* mucous membrane without causing any indicanuria, whereas in the presence of a lesion of the mucous lining they will enter the circulation and cause indicanuria.

While studying the cases showing no hydrochloric acid at all in their stomach-contents—the achlorhydria cases—I found that all, without exception, had a constant indicanuria. As soon, however, as irrigations of the stomach with a 1 : 1000 solution of silver nitrate brought about the temporary reappearance of hydrochloric acid in the gastric juice, the indicanuria disappeared temporarily. These cases were under observation for several years, as our case-reports in the monograph already referred to show; none of them ever developed an organic lesion of the gastrointestinal tract. Hence, one could hardly hold any lesion of the mucosa accountable for this type of constant indicanuria; nor could one assume that the absence of hydrochloric acid *per se* would cause indicanuria, as we had proved before that acid had no bactericidal influence beyond the limits of the stomach.

Tentatively, I would like to suggest the following explanation for this type of constant indicanuria: From the experiments of Bayliss and Starling we know that the normal hydrochloric acid of the stomach, as it enters the duodenum, forms secretin from prosecretin, which is contained in the cells of the duodenal mucosa. This secretin, according to Enriquez and Hallion, enters the circulation and stimulates the pancreas to secrete. The pancreatic secretion, in its turn, causes secretion of the succus entericus; this contains enterokinase, originating from the duodenal glands, and erepsin, originating lower down in the intestines; these two ferments, on their part,

activate trypsinogen (contained in the pancreatic secretion) to trypsin, whereupon the pancreatic secretion becomes proteolytic. If, then, as in the cases of achlorhydria, there is no hydrochloric acid, there will be no secretin formed in the duodenal mucosa and, consequently, there will be no pancreatic secretion brought into the intestinal tract and no secretion of succus entericus. In other words, the normal proteolysis is disturbed and the ever-present bacteria have an opportunity to form putrefactive products out of the undigested proteids; hence, one will find indicanuria as an expression of their excessive formation.

Objection might be made to this explanation on the ground that previously I made the statement that there is no necessary relation between intestinal indol and indicanuria. To this I reply that the *abnormally* functionating intestinal lining of the achlorhydria cases has lost its indol-binding properties, so that the indol formed in the intestines can easily break through this first line of defense and appear as indican in the urine, which it might not have been able to do if the lining had not lost its toxicolytic properties. A *normally* functionating intestinal mucosa will prevent the absorption of even large quantities of indol, as we had occasion to observe in the cases of excessive fecal indol without simultaneous indicanuria. This theory, moreover, is borne out by the success of the treatment applied in these cases: Stomach lavage with nitrate of silver solution (1:1000), hydrochloric acid and pepsin per os (acidolpepsin tablets), and high colonic lavage with a 1 per cent. aqueous ichthyol solution. The cases of nervous achlorhydria gained in strength as well as in weight—in one instance 40 pounds—on this treatment.

In the same group of cases of constant indicanuria belongs also a case of pernicious anemia in a man 72 years of age which I mentioned in my paper read before the meeting of the American Medical Association, November 5, 1910, in St. Louis. This patient, who presented the classic microscopic picture of pernicious anemia (megaloblasts, poikilocytosis, 30 per cent. hemoglobin), gained, in the course of six weeks of this treatment with high colonic irrigations of 1 per cent. ichthyol solution, up to 70 per cent. hemoglobin (Sahli); megaloblasts, poikilocytes, and indicanuria entirely disappeared. The consensus of opinion as to the etiology of pernicious anemia seems to be pointing today toward an atrophic catarrh of the stomach, thus corroborating my claim that achlorhydria is responsible for this class of constant indicanuria cases.

In this group, again, belongs the case of an hypoplastic woman who was under my care for years with the diagnosis of "depressive neurasthenia," until repeated examinations for indican in the urine revealed a constant indicanuria. With the institution of high colonic lavage the whole clinical picture changed, and the woman, who for years had conveyed the impression of a classical case of depressive neurasthenia, showed a most remarkable and complete change in her disposition within a week. The indican, which I had found constantly during the previous months, had now disappeared from the urine.

Altogether, there were about 32 cases among the 2092 studied which thus showed no lesion whatever of the gastrointestinal tract, but did show constant indicanuria. In quite a number of these cases high colonic lavage overcame the indicanuria, and with it disappeared the symptoms of so-called "intestinal autointoxication," as Combe and others of the French school especially have described them—pale face, dry skin, cold feet and hands, dizziness, headache, sleeplessness, nervous depression, neuralgia, migrating rheumatic pains, fetor of the breath, acne, seborrhea, furunculosis, and urticaria. A few of these cases are reported in detail in my monograph. A considerable number presented the stigmata of hypoplasia described by Bartels: Excessive irritability of the vasomotor system (erythema pudicitiæ, dermographism); excessive flexibility of the metacarpophalangeal joints; large tonsils; high, narrow, and hard palate; uvula bifida; heterologous sexual characteristics, manifested, in the case of women, in the masculine type of hair growth, lanugo on the cheeks and upper lip, long hairs in the axilla, hairy upper arms and thighs, extension of the hair on the mons veneris to the linea alba instead of being horizontally limited, perineum hairy, pelvis masculine, lower extremities of masculine length, hypoplastic mammæ, and strongly developed lower jaw; or, in men, shown in the feminine type,—scanty hair growth on the face, breast, and mons veneris; cubitus valgus, etc.

If these cases show so pronounced a type of hypoplasia, why should we not assume that there exists at the same time a hypoplastic condition of the secretory glands and the mucous lining of the gastrointestinal tract, *i.e.*, an insufficiency of secretion of hydrochloric acid, pancreatic juice, bile, and succus entericus? Such an insufficiency must needs produce an insufficient amylo- and proteo- lysis, whereby a considerable portion of the food will enter the colon undigested and here fall a prey to the ever-present putrefactive bacteria. Thus will occur the formation of large quantities of indol, which will easily penetrate the mucous lining, since the latter has lost its toxicolytic properties. The fact, moreover, that this indicanuria, which is *constant,* can be removed *temporarily* though not permanently by colonic lavage, supports my theory. I was able to remove the putrefactive products from the colon mechanically, but could not overcome the insufficiency of the digestive secretions, which betrays a constitutional anomaly, viz., hypoplasia.

As to the treatment of these (hypoplastic) constant indicanuria cases, I may add that the radium waters at St. Joachimsthal, Bohemia, containing 600 units of radium (M. E.) per liter, seem to operate beneficially on account of their activating influence upon the ferments of the body as well as because of their bactericidal effects upon *Bacillus prodigiosus.*

If one considers that these cases constitute only 1½ per cent. of all the cases studied, whereas the diagnosis of neurasthenia is certainly made oftener by the general practitioner than in only 1½ per cent. of all cases coming under his observation, it is evident that *the neurasthenia symptom-complex is only occasionally caused by intestinal autointoxication.*

In connection with this secretory insufficiency, I wish to call attention

to the original and important experiments of Pawlow demonstrating the influence of the *psyche* upon the quality and quantity of gastric secretion. We need not be surprised, in view of his results, that diseases, such as epilepsy, chorea, or nervous (bronchial) asthma, which include in their symptomatology disturbed innervation of the secretory glands, should show indicanuria, and that the removal of this indicanuria by means of high lavage has no influence whatever upon the disease itself. Thus, *while indicanuria constitutes one of the most constant symptoms of epilepsy and other neuroses, we cannot attribute to it any etiologic importance.*

II. The cases of *transitory indicanuria* are due either to *transitory organic* lesions of the gastrointestinal mucosa, as in the temporary indicanuria of measles and other exanthemata, and in acute gastroenteritis, or to *transitory secretory insufficiency* (psychic). As a rule, they do not require any treatment.

III. The *recurrent* or *cyclic* form of *indicanuria* constitutes the most frequent type. In the course of my studies on hyperchlorhydria the fact became evident to me that all cases exhibiting symptoms of gall-bladder or appendiceal trouble, or of ulcer of the stomach or duodenum, always showed indican in the urine with the recurrence of these symptoms, whereas with their disappearance the indican likewise disappeared from the urine. Having previously found that every lesion of the gastrointestinal mucosa, of whatever nature, produced indicanuria, I utilized this type of cyclic indicanuria for the differential diagnosis of obscure cases that came under my observation with indefinite gastrointestinal symptoms. With due consideration of all other clinical symptoms, I was thus enabled, in many instances, to make a positive diagnosis of a "surgical" disease where the condition had for years been taken for "nervous dyspepsia," "gastritis," "neuralgia," etc. Many such cases were thus diagnosed early and came under the surgeon's care at the earliest possible stage, as may be seen from the histories given in detail in my monograph. Many a case of recurrent surgical gall-bladder trouble—cholelithiasis—could be diagnosed long before the appearance of the typical gall-bladder colic, and operated upon before pancreatitis, pericholecystitis, empyema of the gall-bladder, etc., became established, thus reducing the mortality of the operation. Many a case of chronic ulcer was operated upon early enough to avoid the development of carcinoma upon an ulcer basis. Many a case of chronic appendicitis, moreover, was thus recognized. After the removal of the cause of this type of indicanuria by cholecystostomy, gastroenterostomy, appendectomy, etc., the indicanuria itself disappeared, thus proving the correctness of my assumption.

In conclusion, I wish to point out the practical results of my studies. Instead of merely guessing at the diagnosis in those cases which come under our observation with indefinite gastrointestinal symptoms, we should (1) regularly test the twenty-four-hour urine for indican, for a period of at least two months (one single test has no value), and thus determine the type of indicanuria present; (2) ascertain if there is achlorhydria; (3) institute high colonic lavage. The latter will remove the *recurrent* type of

indicanuria only when the lesion is located in the colon; if the lesion be higher up, it will have no influence whatever. The recurrent indicanuria in these cases is quite often the only positive evidence at hand of gastro-intestinal lesions requiring surgical interference.

In cases of *mucous colitis,* indicanuria will prove of differential diagnostic value in affording a distinction between *nervous* mucous colitis and the *symptomatic* variety of this affection, recurrent indicanuria being present where the mucous colitis has been merely a symptom of gall-bladder disease, appendicitis, or ulcer, while the true nervous mucous colitis shows no indicanuria.

In cases of *diarrhea* one is enabled positively to state whether the disease is due to mere nervous hypermotility of the intestines, or to organic lesions, by simply following the indican excretion.

In cases of *hyperacidity* coexisting recurrent indicanuria points to a reflex hyperacidity caused by surgical lesions, such as ulcer, cholelithiasis, and appendicitis, while its absence suggests a merely nervous or toxic (*e.g.,* nicotine) origin of the hyperacidity.

In short, indicanuria *per se* only rarely calls for any treatment, but constitutes, according to its type, a most valuable sign in the diagnosis of various diseases of the gastrointestinal tract.

Cyclopedia of Current General Literature

Acidosis in Surgery.—Because of a marked reduction in the normal alkalinity of the blood, many of the patients requiring surgical operations are unfit subjects for general anesthesia and the ordeal of an operation. The warning signs in such cases are: 1. A history of unaccountable headaches, vertigo, attacks of dyspnea, occasional nausea or vomiting, an unreasonable dread of the operation, tachycardia, and other nervous symptoms. 2. A peculiar, sweetish odor to the breath, suggesting the odor of rotten apples. In some cases this is marked and unmistakable. 3. The presence in the urine of the acetone bodies.

To disregard these warning signs is to subject the patient to one of two undesirable conditions: (1) An anesthesia requiring large amounts of ether or chloroform, and attended with struggling and great rigidity of the muscles, difficult breathing, a rapid pulse and nausea, followed by a prolonged and nerve-racking convalescence with persistent vomiting, restlessness, dyspnea, a rise in temperature, and much suffering; (2) if less fortunate, to a fatal termination, preceded by nausea, air-hunger, persistent vomiting, a rise in temperature, and great nervousness, followed by coma and death in from ten hours to two or three days. A recognition of the acidosis in time, followed by the institution of such measures as a carbohydrate diet of, say, from 6 to 8 ounces (180 to 240 Gm.) of oatmeal

and cream with lactose, large quantities of carbonated alkaline water, colon flushings with an alkaline solution, and the internal administration daily of 3 to 4 drams (12 or 16 Gm.) of sodium bicarbonate or sodium citrate by mouth, will be followed by a rapid disappearance of all or most of the unfavorable symptoms, and the patient will be rendered, for the time being at least, a safe subject for the anesthesia and the operation. W. B. Russ (Journal of the American Medical Association, November 1, 1913).

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Acute Poisoning by Coffee.—While chronic intoxication through excessive use of coffee is a common condition, cases of acute poisoning, such as that described by the author, are extremely rare. The patient was a woman 46 years of age who, her menstrual flow not having yet appeared sixteen days after the expected time, ingested as a remedy an infusion of 250 Gm. (8⅓ ounces) of coffee in 200 Gm. (6⅔ ounces) of water. Half an hour later there appeared a prickling sensation in the skin, which was followed by nausea, cramps, and fainting spells. The latter became more and more frequent, and the patient experienced vertigo so pronounced that she could no longer keep her eyes open. Five hours after the taking of the coffee there was extreme pallor, slight cyanosis, and coldness of the extremities. The pulse rate was 44. The drug had been taken at 9 A.M., and no urine was passed until the following morning. At this time there was no albuminuria. There were violent pains in the epigastrium, the tongue was dry and pasty, and no bowel movement had taken place during the twenty-four hours. After this a gradual improvement took place. On the following day the condition was normal, and on the same evening menstruation began.

The treatment applied in this case consisted of active rubbing of the limbs and the administration of iced Vichy water, with a heaping teaspoonful of sodium bicarbonate added to each glassful. The amount of caffeine ingested must have been between 2.5 and 5 Gm. (38 and 76 grains). The maximum permissible dose of this alkaloid is 2 Gm. (30 grains) in the twenty-four hours, divided into four doses. In this case the whole amount had been taken at once. Ten grams (150 grains) of coffee suffice in the preparation of a single cupful and the dose taken in this case was therefore equivalent to 25 cupfuls. Sterne (Revue médicale de l'Est; Lyon médical, December 21, 1913).

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Anesthesia, Anoci Association in.—Through selection and combination of anesthetics the author aims to attain an anesthesia that will exclude all stimuli from the brain. His illustrative description of the technique adopted in abdominal operations is as follows: 1. Excluding the very young, the aged, and patients with depressed vitality, he first administers, as an average, ⅙ grain of morphine and $\frac{1}{150}$ grain of scopolamine one hour before operation. 2. If local anesthesia alone is employed novocaine in 1:400 solution is used by progressive local infiltration. 3. If inhalation anesthesia is employed he administers nitrous oxide, either alone or with ether added as required. 4. As soon as the patient is uncon-

scious, first the skin and then the subcutaneous tissue is infiltrated with 1:400 novocaine. In order to spread the novocaine, local pressure is at once applied with the hand. Anesthesia is immediate. Incision through this anesthetized zone exposes the fascia. The fascia is then novocainized, subjected to pressure, and divided. This brings him to the remaining muscle or posterior sheath, and to the peritoneum. These structures are infiltrated with novocaine, subjected to pressure, and divided within the blocked zone. If blocking has been complete, upon opening the abdomen there will be found no increase of intra-abdominal pressure, no tendency to expulsion of the intestines, and no muscular rigidity. 5. The peritoneum is next everted and a ½ per cent. solution of quinine and urea hydrochloride infiltrated about the line of proposed sutures; as before, the parts are then subjected to momentary pressure. This infiltration serves as a block; and as its effects last for several days, it should prevent or at least minimize the postoperative wound pain and the postoperative gas pains, and by so much minimize postoperative shock. Quinine and urea hydrochloride causes a certain amount of edema of tissue, which lasts for some time after the wound is healed. 6. The relaxed abdominal wall permits of exploration of the entire abdominal cavity with ease. If there is no cancer or acute infection in the field of operation, the following regions may be blocked as completely and in the same manner as the abdominal wall, viz.: The mesoappendix, the base of the gallbladder, the uterus, the broad and round ligaments, the mesentery, and any portion of the peritoneum. Operations on the stomach and intestines made without pulling on their attachment cause no pain, and hence novocaine infiltration of these viscera is not required. If the brain has received no stimuli during the operation closure of the upper abdomen is as easy as the closure of the lower. No matter how extensive the operation, how weak the heart, or what part be involved, if the anoci technique is perfectly carried out the pulse rate at the end of the operation is the same as at the beginning. The postoperative rise of temperature, the acceleration of the pulse, the pain, the nausea, and the distention are minimized or wholly prevented, as illustrated in charts of a case of abdominal hysterectomy accompanying the author's paper. G. W. Crile (Cleveland Medical Journal, August, 1913).

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Birth Trauma, Surgical Treatment of.—Hemorrhage in the newborn is almost always subdural, as in the adult. Instrumental delivery does not play so important a part as is ordinarily supposed. One of the greatest difficulties in recovery is that the hemorrhage is so often bilateral. The determination of the location of the hematoma is the crux of the situation from the surgical point of view. Those above the tentorium are more easily recognizable than the subtentorial because the muscular symptoms are more prominent. In the subdural type, lumbar puncture will usually show signs of hemorrhage. It is further necessary to ascertain whether, in the pretentorial cases, the hemorrhage is unilateral or bilateral. Lumbar puncture should be

done in all suspicious cases, and also in cases in the subdural spaces of both sides. The first indication is to relieve the pressure. A small piece of muscle applied to the bleeding point will satisfactorily control the hemorrhage in most cases. To attempt to control it with ligatures is a difficult matter. The operative mortality is over 50 per cent. and will of necessity always be high, but it should not be considered prohibitory. C. H. Frazier (Journal of the American Medical Association, December 6, 1913).

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Delirium Tremens, Sodium Bromide Injections in.—In delirium tremens the amount of cerebrospinal fluid is markedly increased, and the fluid is highly toxic, its injection into dogs bringing on a rapid fall in blood-pressure. The author's plan of treatment consists in withdrawal of cerebrospinal fluid through lumbar puncture in amounts as great as possible—50 to 60 c.c. An equal amount of a sterile 1 per cent. solution of sodium bromide is then injected with a syringe. This amount, and even as much as 80 c.c., of fluid was injected into the subdural space in a period of one minute without the least sign of intracranial pressure. Sodium bromide is not toxic to the nervous system. The potassium salt should not be used, as it is slightly irritating. The patients, as a rule, showed immediate improvement, delirium being lessened within a few minutes after the injection. This improvement disappears after a short time, to be followed, however, in from twelve to fifteen hours by a permanent disappearance of the delirium. Occasionally, after a few days there may be a relapse, which is usually controlled by a repetition of the injection. S. P. Kramer (Boston Medical and Surgical Journal, October 30, 1913).

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Diabetes Mellitus, a Point in the Treatment of.—The author calls attention to a point in the treatment of diabetes which seems to have been overlooked, but which he believes to be of fundamental importance, viz., that the diet in diabetes should be arranged so as to make as easy as possible the processes involved in protein metabolism. The dietetic treatments in vogue impose unnecessary burdens on nitrogenous metabolism by giving protein largely in a form the metabolism of which is comparatively difficult — animal tissues. The instability of the liver as regards its glycogenic function is, one would naturally expect, increased by such treatment, and this may be the reason why extreme limitation of carbohydrates has seemed necessary in certain cases.

The argument advanced receives support from the fact that a large proportion of cases of diabetes occur in families in which gout, obesity, chronic arthritis, chronic nephritis, apoplexy, and cardiovascular diseases are prevalent. It was in treating persistent glycosuria occurring in such patients, with nitrogenous metabolism obviously insufficient, that the author's attention was drawn to the therapeutic value of an "easy" nitrogenous diet in diabetes. Illustrative cases are described. Thus, a man 60 years old, of gouty tendency, during the fifteen years ending five years before, had always shown a trace of sugar in the urine. Five years before he was placed on the

"easy diet"; that is, one consisting almost exclusively of milk and its products, cereals, fruits, and vegetables. Since then the urine has been free from sugar.

A woman 43 years old, obese, with lithemic family history, about two years before had developed glycosuria to the extent of 5 per cent., with polyuria and other symptoms. When she was placed on a moderately severe non-putrefactive diet, a generous quantity of selected carbohydrates being allowed, in four weeks her urine was clear. Later, after indiscretion in eating, the glycosuria reappeared. A similar diet reduced the sugar from 4 per cent. to *nil* in nine days. E. E. Cornwall (Long Island Medical Journal, December, 1913).

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Dysentery, Treatment of Bacillary.—The treatment of bacillary dysentery consists in keeping the patient absolutely at rest and warmly covered, inhibiting the stimulating factor in the intestines by attending carefully to the diet, and administering etiologic treatment. Only very small quantities of food should be given at a time. Calomel is valuable in the beginning of the affection, to clean out the bowels and hinder extension of the disease upward. In addition, the patient should be ordered to take acid drinks and given enemata of saline or soda solution to remove the irritating and infectious contents of the bowel. Methylene-blue enemata have been advised.

In the chronic form of bacillary dysentery the enemata that are best are silver nitrate in dilution of 1 : 500 or 1000; tannic acid in 0.25 to 0.5 per cent. solution; thymol in 1 : 500 to 1000 dilution; resorcinol, 1 to 2 per cent., and creolin, 1 to 2 per cent. In some cases an enema of gum arabic mixed with subgallate of bismuth or iodoform gives good results. As an internal remedy, phenyl salicylate, tannigen, ichthyol, and calomel may be used. Serum treatment, inasmuch as it can do no harm and is based upon specific medicine, should be employed. In mild cases serum should be injected in doses of 10 c.c.; in the medium cases it is to be injected twice in doses of 10 c.c. at an interval of from six to ten hours, and in the severe cases the amount may be between 40 and 60 c.c., though when it is used daily not more than 20 c.c. should be given at a time. The serum treatment shortens the recovery from the disease, quickly cures or markedly ameliorates the mild cases, and strongly affects the medium and severe ones. In the latter two grades, improvement in all symptoms is noted in a day or two after the injection, and remarkable results may be seen in a week's time. Where ulceration is well established, the action of the serum is not so pronounced as in the earlier stages; yet, healing of the ulcers with cicatrization often takes place. In such cases, moreover, the fever is reduced, the number of stools markedly diminished, the general condition improved, and the appetite increased. The mortality of this form of dysentery under the use of serum had been reduced to one-third of its former figures. In addition, appendicostomy or cecostomy with irrigation is advisable in severe cases.

In chronic *B. coli communis* infections, rest is not so important as in the foregoing two, although advisable.

The diet should be fluid in type, and semisolid, with scraped meat, when the diarrhea has subsided. The usual methods for the control of diarrhea are in order, and irrigation of the bowel with the various medicated solutions is called for. The writer has treated 4 cases having considerable ulceration with autogenous coli vaccines, and a cure took place in each instance in about three months' time. Anthony Bassler (Interstate Medical Journal, August, 1913).

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Erysipelas, Observations on 800 Cases of.—In a series of 800 cases of erysipelas there were 93 deaths, or 11.625 per cent. According to the lesion, the mortality varied as follows: Facial cases, 500, with 27 deaths, or 5.38 per cent; body cases, 56, with 28 deaths, or 50 per cent.; leg cases, 33, with 9 deaths, or 27.3 per cent.; complicated cases, 211, with 29 deaths, or 13.7 per cent. The type of disease usual among infants is the migratory or general body form, and hence the mortality is highest among them. As to the facial type, in the 173 cases in adult women there were but 3 deaths, or 1.73 per cent. Addiction to alcohol, so common among adult males, accounts, in part, for the great discrepancy between the sexes, as it predisposes to acute alcoholism and pneumonia, as well as intensifies the toxemia of the disease. The causes of the 93 deaths seemed to fall under the following headings: Toxemia of erysipelas, 36; septicemia, 19; pneumonia, 16; nephritis, 3; endocarditis, 3; acute alcoholism, 16.

Diagnosis.—Typical facial erysipelas is usually easily diagnosticated. Erysipelas of the legs or arms or body, unless it be in cases which have extended from the head, presents much more difficulty, and the author believes it is often impossible to differentiate erysipelas in the leg from cellulitis or lymphangitis. About half of all the so-called cases in the leg admitted were of cellulitis, pure and simple, and were at once cleared up either by wet dressings or on giving exit to the pent-up pus. The difficulty in diagnosis when erysipelas starts on the extremities or trunk is that the advancing border is usually less well defined and elevated than in the facial type.

Treatment.—The *internal* administration of iron and quinine has been long recommended for erysipelas, but the author has used these remedies in many cases without seeing any striking beneficial results. The iron often deranges the already enfeebled digestion. For this reason in most cases no internal medication was prescribed aside from sedatives, stimulants, and cathartics, as needed.

Locally, the author's routine treatment for facial erysipelas consists in the use of continually wet cold compresses. Beside each bed is a bowl of boric acid solution in which ice is placed, and cloths frequently moistened with the solution are continuously kept on the face. This method is simple, cleanly, harmless to the eyes, inexpensive, and seems effectually to relieve the pain and burning. Where the leg or arm is involved, wet dressings of boric acid or aluminum acetate are used. In migratory cases with involvement of the body, usually no attempt is made to cover the affected areas, but occasionally ichthyol is applied or the surfaces painted with picric acid solution. The use of solutions of phenol, mercuric

chloride, etc., is dangerous, does not limit the spread of the lesion, and accomplishes no more than plain water or boric acid. Ichthyol, the most widely used local application, does not give the patient as much relief as cold compresses, and besides is neither cleanly nor curative. S. Erdman (Journal of the American Medical Association, December 9, 1913).

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Furunculosis, Treatment of.—Combined tincture of iodine and ichthyol treatment is recommended by the author. Where the boil is already soft, he begins by painting the tincture freely over and around it. Where there are several lesions not very far apart, the entire area is painted over. Where incision is deemed necessary, infection of adjoining healthy skin surfaces is thus avoided. After the iodine application, a gauze pad covered with a layer of 10 per cent. ichthyol in petrolatum is placed over the area, covered with a little cotton, and held with a few turns of bandage. Next day the pus discharged is carefully removed and the area wiped off with tampons impregnated with benzine, in order to free the skin of fats and enable it properly to receive a second coating of iodine tincture. This wiping referred to can be done without causing appreciable pain, the local inflammation having subsided often in a remarkable degree during the previous twenty-four hours. Ichthyolated petrolatum is then again applied, and the whole procedure continued until the pus has been completely absorbed. The disinfection with tincture of iodine must then be discontinued, in order to avoid follicular irritation, and the treatment kept up with the ichthyolated petrolatum, or, better, with pure ichthyol. Where considerable superficial tissue has been lost, epithelial growth can be activated by employing the following ointment:—

℞ Argenti nitratis, gr. xv (1 Gm.).
Balsami peruviani, gr. lxxv (5 Gm.).
Adipis lanæ hydrosi, ʒiiiss (100 Gm.).
M. et ft. unguentum.

Extensive loss of tissue is rare, however, when ichthyol has been used.

In the case of a furuncle which is nodular and not yet softened, iodine is first applied, as before, a thick coating of ichthyol next put on, and the ichthyol either allowed to dry (this requiring about twenty minutes) without a dressing, or a little absorbent cotton placed over it and covered with gummed adhesive material. Next day the dried ichthyol—with the pus, in case it has broken through—is wiped off with warm water, or, if possible, the area washed with soap and water. Iodine tincture is then again painted on, followed at once by pure ichthyol, whether the boil be still closed or have to some extent opened. The iodine applications are continued only as long as redness and swelling indicate an infective nature of the pus, with consequent danger of infection of the surrounding skin. If vesicles appear, the iodine should at once be discontinued, the ichthyol, however, being continued. Generally the iodine applications can be stopped on the third or fourth day, after which the ichthyol should be used three or four days more, or until all inflammation has subsided, as shown by disappearance of tenderness. To avoid soiling the underwear, a single layer of

gauze, tissue, or cigarette paper may be applied after the ichthyol has been allowed to dry.

The 10 per cent. ichthyol ointment should be used only in the neglected and already far advanced cases; pure ichthyol should otherwise always be employed.

Simultaneous internal use of sulphur-containing or arsenical waters, or of Fowler's solution, is advisable in the severe and obstinate cases. According to the author's experience, the combined iodine and ichthyol method is far superior to all other procedures commonly followed, causing surprisingly rapid absorption of the infiltrate and cessation of pain, as well as preventing the formation of fresh furuncular lesions and of conspicuous scars. F. Berger (Semaine médicale, November 26, 1913).

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Gastric Ulcer, Diagnosis of.—That ulcer of the stomach is diagnosticated only about one-third as often as it should be has been proved at autopsy time and again, and can be shown clinically when routine employment of the more exact methods for the recognition of ulcer is tried. At least 90 per cent. of the cases should be recognized with our present diagnostic methods. The average physician does not suspect the enormous number of dyspeptics the cause of whose trouble lies in ulcer of the stomach or duodenum. He looks for the former textbook symptoms and does not find them. The entire subject should be rewritten. The real signs of ulcer are not tested for often enough in patients who have not the unmistakable earmarks of ulcer. What is required is early diagnoses before the typical and evident symptoms appear. Besides the acute or so-called medical ulcer and the chronic indurated ulcer, there can be little doubt that there is at least a third class, chronic non-indurated ulcer,—perhaps an intermediary stage or a forerunner of the indurated ulcer,—which may persist for years and not be recognized. The average duration of the cases operated upon by the Mayos has been twelve and one-half years.

The history and symptoms complained of by the patient are typical in but few cases, notably the chronic surgical ulcer and some of the acute ulcers. There are only two characteristic points about the pain in ulcer: It appears at a fixed time after meals, different in different individuals, but always the same in the one patient; and it is relieved by more food, alkalies, or vomiting. Heartburn, pyrosis, regurgitation, etc., are all common, but by no means characteristic of ulcer.

Hematemesis probably does not occur in 10 per cent. of the patients. As Cabot remarks, it is decidedly more characteristic of cirrhosis of the liver than of ulcer. Even nausea and vomiting do not occur in one-half of the ulcer patients, and, even when present, have absolutely no value unless it be in the effect of the vomiting in stopping pain.

Two points in the history are of decided value in the diagnosis of indurated ulcer. There is exhibited a certain periodicity in some cases. The patient may have been miserable for a couple of months, when suddenly, with no apparent reason, and often in spite of some gross indiscretion, he will be completely relieved of all symptoms for days, weeks, or

months. Again, when pain is at its height all other symptoms from which the patient is suffering are apt to be increased also, and they tend to be relieved by the same measures as arrest the pain.

The results of physical examination are somewhat more reliable than the history and symptoms. There is usually present at some time a tender point at some spot in the epigastrium or at the eighth dorsal vertebra behind, or both. The tenderness is often slight. To be of diagnostic value it should always be in the same place, and there should be but one spot. Points of marked tenderness can often be found in enteroptotic nervous women, but usually further examination will reveal that there are several of these spots. Muscle spasm and rigidity are, when present, but further evidence of tenderness.

The special tests and laboratory aids afford the most exact means of diagnosis. Occult bleeding occurs in the large majority of all ulcers, regardless of the duration or variety. It is, however, characteristically intermittent, and therefore several examinations under varying conditions should be made. The benzidine reaction is the best, but because of its delicacy several precautions are necessary: Test-tubes should be absolutely clean. The patient may be on regular diet when the first examination is made, but if a positive test is secured he should then be put on a meat-free diet for several days, to exclude the blood from the meat, and the test repeated. If a positive test is then obtained, all bleeding points, as hemorrhoids, bleeding gums, etc., should be excluded. If negative results are obtained in a case suspected of ulcer, the patient should be placed upon a coarse and irritating cellulose, but meat-free, diet for a couple of days.

Hyperacidity is found in many patients with ulcer, but is not to be compared in value to the presence of hypersecretion, which is a valuable indication, though not by any means pathognomonic.

As a test for the localization of ulcer, the thread-impregnation test of Einhorn is well-nigh perfect. As a means of diagnosis, certain positive threads are almost infallible, but the author does not believe that a stained thread always denotes ulcer, even in the absence of cirrhosis and cancer. Threads exhibiting a plain mark or two marks denoting the rim of an ulcer, with an unstained portion between, are never misleading. Any sort of a stain which is present on two or more threads at exactly the same point is a sure indication of ulcer.

In brief, there are several combinations which practically assure a diagnosis of ulcer:—

1. Tender point with occult blood.
2. Hypersecretion with tender point.
3. Hypersecretion with occult blood.
4. Tender point with repeated positive thread tests.
5. Tender point with hematemesis.
6. Hematemesis with hypersecretion.
7. Hypersecretion with positive thread tests.

J. R. Verbrycke, Jr. (American Journal of the Medical Sciences, November, 1913).

Infantile Paralysis, Surgical After-treatment in.—The author discusses the use of certain operations on the legs and trunk in these cases. The most common deformity is pes equinus, which in some cases may be due to neglect of the physician to secure the proper position of the foot during the first few months after the attack. The operation for late deformity of this kind is lengthening of the tendo Achillis by the simple step method and suture with fine silk. The sheath should always be restored by fine stitches. It is often wise to lengthen the toe flexors also. The simplest way is to plunge a small tenotome into the sole of the foot at the base of each proximal phalanx, feel for the tendons with the flat of the blade, and divide them while the toe is dorsally extended. Straightening knee contractures is often difficult on account of the danger to vessels and nerves, and if the deformity cannot be gradually corrected shortening of the femur may be required. The author advises saving the articulation by resecting a piece above the epiphysis. Radical operations on the hip may be required, *e.g.*, dividing muscles and tendons. The necessity of retaining permanently the correction by apparatus is to be borne in mind. E. W. Ryerson (Journal of the American Medical Association, November 1, 1913).

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Leprosy, Transmission of.—Bedbugs can be induced to take up lepra bacilli with blood to which the bacilli have been added. Within the bugs the bacilli for a time increase in size and apparently in numbers; but they eventually disappear, partly by discharge with fecal matter, partly also by disintegration within the bedbugs. In the bugs thus infected the writers found the bacilli in the glands as well as in the alimentary canal. Bedbugs acquire lepra bacilli also with blood taken from human leprous subjects, but not invariably. The bugs infected in the laboratory—presumably more heavily infected than those which are infected from human beings—were found capable of transmitting the bacilli by route of their sucking apparatus to the skin of animals bitten. Whether the disease is thus transmitted in nature, *i.e.*, whether the organisms are unchanged and of sufficient virulence to induce leprosy, remains to be proved. If bedbugs do transmit the disease, they are probably only one of a number of possible conveyors, other types of biting and sucking insects being equally open to suspicion (particularly those which regurgitate in biting). A. J. Smith, K. M. Lynch, and D. Rivas (American Journal of the Medical Sciences, November, 1913).

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Obesity, Colloidal Palladium in.—In view of the fact that the metals of the platinum group, and especially palladium, act as active catalyzers or oxygen carriers, the author decided to experiment with their use in disturbances of organic oxidation, and in obesity he used colloidal palladium according to the following formula, trying it first on his person, hypodermically:—

℞ Colloidal palladium, gr. xv (1 Gm.).
Sodium carbonate,
Sodium chloride, of each, gr. vj (0.4 Gm.).
Distilled water, enough to make ℥iiiss (100 Gm.).

The injections were followed by

fever, but not by the weakness and prostration usually noticed after injection of other colloidal metals. A layer of fat over the abdomen began to dwindle, and within ten days there was a loss of weight of 4 kg.

Five milligrams of the drug were injected into 2 rabbits for two consecutive months without any ill results. The autopsy of the animals seemed to show that the metal collects in the subcutaneous connective tissues.

The same solution was next used in 2 cases of obesity. One lost 19 kg. in weight in three months and another 9 kg. after 20 injections. The dosage was begun at 5 and increased up to 10 mg. The remedy was also used in neurasthenia and diabetes mellitus.

The colloidal hydroxides of the 5 other metals of the platinum group, viz., platinum, rhodium, iridium, ruthenium, and osmium, were also tried. The colloidal palladium proved to be the best preparation. With the exception of some degree of local irritation, it exerted no untoward action. The best results were obtained by suspending the colloidal hydroxide of palladium in olive oil and liquid paraffin in the proportion of 25 mg. of palladium to every cubic centimeter. The dose used was 2 c.c., injected under the skin of the abdomen. Kauffmann (Münchener medizinische Wochenschrift, March 11, 1913).

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Ocular Filtration, Importance of Precise Determination of.—The estimation of the rate and amount of ocular filtration by means of the tonometer should be as much a part of the routine work of the ophthalmologist as is the employment of this instrument for the measurement of ocular tension. A normal average index of filtration presumably exists, but in order to establish its limits investigation is necessary in a large series of normal eyes. In glaucomatous eyes increased tension, as recorded by the tonometer, is invariably associated with lessened or delayed filtration; but a disturbance of drainage may exist, as an important indication of incipient glaucoma, with a tension well within the upper normal limit of 25 mg. Delayed or deficient filtration (the most important premonitory symptom of incipient glaucoma) should warn the surgeon, in spite of the absence of characteristic signs of glaucoma, of the probability of a subsequent onset of this disease.

Further investigation is urgently needed to determine the effect upon ocular filtration of the various operations proposed for the relief of glaucoma. That operation which shall be found to influence filtration most effectually will eventually become the operation of choice in this disease. J. T. Carpenter (Pennsylvania Medical Journal, January, 1914).

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Paranephritis, Diagnosis of.—That the symptomatology of perinephric abscess is not always similarly described by various authors is pointed out by the writer. According to some, there is pain radiating down the lower extremity of the same side, while others believe such a radiation of pain so characteristic of psoitis as to afford a means of distinguishing the latter from perinephric abscess. From observation of 4 cases of paranephritis, with diagnosis confirmed

at operation in each, the author is led to ascribe considerable diagnostic value to pain referred to the lower limb of the same side in this condition. Together with fever and polymorphonuclear leucocytosis, this type of pain, he asserts, is one of the most important signs of paranephritis. There are present both pain and tenderness, particularly marked at certain points along the external cutaneous nerve, which, as is well known, passes out below the outer insertion of Poupart's ligament at the anterior superior iliac spine. At this point, and also on the external aspect of the thigh, along the course of this nerve, the most pain and tenderness are to be noted. Belikov-Chtomitch (Meditzinskoie Obozrenie; Semaine médicale, October 29, 1913).

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Pertussis in Children, Vaccine Treatment of.—The vaccine used by the author was prepared in the following manner: The organisms were grown in quantity on ascites agar, removed with salt solution, and shaken. The number of bacteria per cubic centimeter was determined according to the method of Wright, after which the suspension was diluted to the proper standard and preserved with 0.2 per cent. trikresol. The original vaccine contained 20,000,000 dead bacilli per cubic centimeter. The infants treated received ⅓ c.c. and all others ½ c.c. as the initial dose. Within four days the infants received ⅔ c.c. and all others 1 c.c. Many of the children coughed less during the first night. By the second morning the number of paroxysms in nearly every case was greatly reduced. In several young children who had developed bronchopneumonia as a complication, however, no good effects were obtained. These require a different vaccine. The author used such a vaccine in one case, with good results. This patient had received 4 doses of the pertussis vaccine at four-day intervals. These controlled the paroxysms fairly well, but a bronchial cough continued. One-fourth cubic centimeter of a vaccine containing *Bacillus pertussis,* 50 million; *Staphylococcus aureus,* 20 million; *Streptococcus pyogenes,* 10 million, and *Micrococcus catarrhalis,* 30 million, was then injected, and within twenty-four hours there was a marked change in the cough, which soon subsided.

Altogether the author has treated about 70 cases of pertussis with the vaccine, with uniformly good and often striking results. H. A. Davidson (Kentucky Medical Journal, October, 1913).

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Pneumonia, Treatment of.—Ethylhydrocupreine hydrochloride, a salt of a derivative of cupreine, an alkaloid closely related chemically to quinine, was given internally by the author in cases of pneumococcic lung inflammation, with good results. The dose was usually 0.5 Gm. (7½ grains) three times a day, the daily amount not exceeding 1.5 Gm. (23 grains). In 9 cases no other medication was employed; in all of these the temperature fell more rapidly, by crisis or lysis, than with other methods of treatment. The drug unquestionably inhibits the growth of the pneumococcus, particularly if used in the early stages of the disease. Where there was no effect, the pneumonia was generally dependent upon some other infection. No untoward after-

effects were observed, although one patient took altogether 9.5 Gm. (2⅓ drams). H. J. Vetlesen (Berliner klinische Wochenschrift, August 11, 1913).

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Renal or Perirenal Abscess as a Complication of Furunculosis.—The author has met with 4 cases of this kind. Three recovered after operative intervention, but the fourth died of cardiac weakness and exhaustion.

Although the renal complication usually follows a sluggish furuncle that has existed for some weeks, it may instead follow a carbuncle, felon, or suppurating wound. The staphylococcus is the causative organism. The most important and almost invariably present symptom of renal involvement is tenderness in the kidney area. Pain is not regularly observed, or appears only gradually. The abscess is usually situated in the upper pole of the organ, which increases in size. Urine examination is, in the majority of instances, negative. Where erythrocytes are found, the presence of local tissue disease or renal congestion is indicated. Only rarely is there a distinct pyuria—in the cases where the abscess discharges into the pelvis. In all cases the fever follows a regular course, and for a week or two, preceding the manifest renal disturbance, constitutes the only objective sign present. Deep palpation of the kidney will afford the earliest clear indication of trouble in this situation.

In the author's fatal case, the abscess developed in the retroperitoneal tissue, below the liver, and, in addition, involved the pelvis and renal vein, causing thrombophlebitis of the inferior vena cava and common iliac veins. In another case the renal abscess was complicated by thrombosis of the right femoral vein, intrapleural exudation, and paralysis of the auditory nerve.

The prognosis is generally favorable if operative treatment is instituted sufficiently early. A large opening and perfect drainage of the kidney region are essential to success. Zinn (Therapie der Gegenwart; Paris médical, September 20, 1913).

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Sciatica, Quinine and Urea Hydrochloride in the Treatment of.—The author treated 8 cases of sciatica by injections of a 4 per cent. solution of quinine and urea hydrochloride in normal salt solution into the subcutaneous tissue over the course of the nerves. There were 50 injections in all, with no untoward result other than the slight soreness that follows any hypodermic injection.

Eight months after the first case had been treated there had not been a return of the attack in any. All the patients experienced decided relief within a short time after the first treatment and none had a severe attack after the third. The injections were given daily for four doses, and then every other day until the patients were entirely relieved. It was because of a determination not to use morphine in these cases that the author resorted to quinine and urea hydrochloride. Two cases of facial neuralgia have also been treated with complete relief after the second injection. H. A. Cables (Journal of the American Medical Association, December 27, 1913).

* * *

Tuberculosis, Treatment of Fever in Pulmonary.—Unless a high tem-

perature is maintained for some time, active attempts artificially to reduce it are not called for. Where the prolongation of fever is a strain on the patient's strength, the antipyretic drug to be preferred, according to the author's experience, is pyramidon. In some instances 5 grains given in cachets at night proved sufficient, while in others 5 grains three times a day were required. As a rule, the drug is well borne, and depression has only occasionally occurred. In some cases excessive perspiration was noted. Although some time ago the author tried acetphenetidin fairly often, the depression outweighed any advantages the temporary lowering of the temperature might have had. In the majority of cases, indeed, antipyretic drugs are not to be recommended. In some patients of a strongly neurotic disposition the temperature is very easily affected, and the curve may be irregular, even although the individual is kept at rest as far as possible in bed; under these circumstances the administration of bromides will be found efficacious.

An agent far more reliable than drugs is rest. Sometimes a short period of this suffices, but frequently some weeks or even months may be required. Rest should be insisted on until, in men, the temperature does not rise above 99° in the twenty-four hours; in women 99.2°, or even 99.4°, may be allowed. When the curve has maintained this level for four to six days, the patient may be allowed to get up for two hours and sit in a chair, and then the next day he can try moving about his room, the rest of the day being spent on a couch instead of in bed. If circumstances permit, the patient can lie in the open air on a couch, properly protected from cold, in front of the window. The time for getting up and the amount of exercise are then gradually extended, careful watch being kept on the temperature chart.

In cases which do not respond to these measures "absolute rest" may be tried, the patient lying "like a log" and being treated as though suffering from typhoid fever, with the exception, of course, of the diet. The beneficial effect of this is especially marked when there has been severe autoinoculation.

To secure the required rest, drugs may sometimes be of use. Patients with severe cough often exhibit a raised temperature, owing to the physical exertion and resulting autoinoculation. If a sedative cough mixture be given a more favorable temperature may be obtained.

When rest and the ordinary drugs fail, tuberculin may be cautiously tried. For some time the author has largely confined himself to the use of tuberculin in febrile cases, and met with a certain amount of success, without ill effects. Either the tuberculin residue (T. R.) or the bacillary emulsion (B. E.) is used. The initial dose is only $\frac{1}{100000}$ mg.; sometimes $\frac{1}{200000}$ mg. If the temperature chart indicates no change after five to seven days the same dose is repeated. If there is then no change, or if no febrile reaction follows, a dose of $\frac{1}{50000}$ mg. should be administered, and another interval of five days allowed to pass; if there is no change another dose of $\frac{1}{50000}$ mg. is given. The same procedure is repeated with $\frac{1}{25000}$ mg. and $\frac{1}{20000}$ mg. If no lowering of the temperature is achieved in this manner, it is better not to proceed with the tuberculin.

If after the initial dose a rise of temperature occurs, the dose should not be increased; in fact, it is advisable to lower it. It is not usual, however, to

obtain a febrile reaction with such small doses. If after the initial dose there is a fall of temperature or flattening of the curve, another dose should not be given until the temperature begins to oscillate again. The pulse must also be noted, undue frequency necessitating a smaller dose and slower progress.

The administration of tuberculin in this way occasionally appears to produce an immunizing effect sufficiently strong to turn the unfavorable course of the disease into a more favorable one. In some cases, on the other hand, under the tuberculin the temperature is lowered and a tonic effect produced, the patient feeling better after each injection, but the progress of the pathologic process is not checked. The duration of the antipyretic action varies, but it is usually short; nevertheless, it is well to give the remedy on account of the temporary relief it affords the patient.

Tuberculin yields the most satisfactory results where the patient is free from fever while at rest, but shows rise of temperature when exercise is taken. By persevering with the treatment a patient who at first could not be up for two hours without a severe autoinoculation is reported able to be up without fever. F. J. Wethered (Lancet, October 11, 1913)

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Urethra, Treatment of Traumatic Rupture of.—In all cases of traumatic urethral rupture perineal incision should at once be resorted to without attempting urethral catheterism. External urethrotomy, with the introduction of the temporary catheter, is the only rational treatment in complete rupture with infection and contusion of the soft parts. In incomplete rupture, when there is not much contusion of the tissues, and infection is absent, immediate suture of the urethra and soft parts of the perineum is to be attempted, with derivation of the urine by suprapubic cystostomy or a urethrostomy in the membranous urethra. C. G. Cumston (New York Medical Journal, January 3, 1914).

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Venesection in Cerebral Hemorrhage.—In cerebral hemorrhage in a full-blooded patient with face flushed and pulse full, bounding, somewhat slow, and of high tension (200 mm.), venesection will immediately reduce the tension, if only temporarily, 50 or more mm., thus aiding the organism to firmly fix the clot. With the common use and ease of employment of the various sphygmomanometers and the certainty thereby of the accurate determination of the blood-pressure, the physician can easily recognize the high-pressure indication. The act of venesection itself has assumed an unnatural formidableness because it is not in common practice. In the unusually stout person there may become difficulty in finding easily a vein at the bend of the elbow, but in these patients there are usually in the legs varicose veins which can be opened. There is no need of speaking of the complications common a century ago. Today there should be none to the physician who uses even ordinary care. The author reports cases illustrating the benefit frequently derived from removing 12 to 48 ounces of blood in the high-pressure cases. A. MacFarlane (Medical Record, January 17, 1914).

Clinical Summary

Practical hints from articles and abstracts that have appeared in the Monthly Cyclopedia and Medical Bulletin during the current year.

Acne. TREATMENT. Acne vulgaris in childhood or adolescence responds well to thyroid treatment. Thymus employed with advantage in cases with enlarged thyroid and rapid heart. *Morris.* Page 11

Acromegaly. TREATMENT. Case of acromegaly in which thyroid treatment caused headache, dizziness, vomiting, and melancholia to disappear, while pituitary treatment always caused their return. *Salomon.* 30

Amenorrhea. TREATMENT. In amenorrhea, flooding, dysmenorrhea, etc., mammary extract treatment often proves corrective. *Berkeley.* 20

Arthritis Deformans. TREATMENT. Gradual but permanent improvement noted in a number of cases after administration of thymus extract. Pain and swelling disappear and appetite returns. Nucleoproteid extract much preferable to crude gland. Treatment should cover several months, and small doses be continued for some time after apparent cure. *Berkeley.* 20

Bronchopneumonia. TREATMENT. Hot baths, followed by brief cold affusion, in acute bronchitis, bronchiolitis, and bronchopneumonia in young children reduce fever, stimulate expectoration, deepen breathing, exert soporific effect, improve appetite, stimulate elimination through skin, and seem to act specifically in shortening disease. Bath water is at 41° C. (105.8° F.), hot water being added as cooling occurs. Patient is bathed every three hours, up to 5 times a day. Baths particularly appropriate for feeble children who became chilled at periphery with internal temperature high. The weaker the child and higher the fever, the more frequently baths are given. Where the temperature not above 39° C. (102.2° F.), ten-minute bath is given 3 times a day. Hot bath is not contraindicated where temperature exceeds 40° C. (104° F.) in infants or very young children, though for older children warm baths may be substituted. At conclusion of each bath nurse elevates child from hot water so back of neck is exposed, and cold water is dashed once over neck, causing reflex gasp for breath. Child is next reimmersed momentarily in hot water and cold water poured on chest, after which he is dried, wrapped in warmed clothes, and placed in warmed bed. Baths to be continued once daily into convalescence if patient coughs. *Arneth.* 55

Constipation. TREATMENT. Constipation and rectal irritation in neurasthenics greatly benefited by the perineal and anal douche, hot as can be borne, followed by cold douche at 60° to 50° F.; stronger revulsive effects are obtainable with an alternate hot and cold application. *Pope.* 50

Eclampsia, Puerperal. TREATMENT. Report of 2 cases in which pituitary extract injections—2 in each patient—yielded successful results, labor being brought on thereby. *Schlossberger.* 28

Eczema. TREATMENT. Both chronic and acute forms respond to thyroid treatment. Fat subjects and those with xerodermia respond best. *Morris.* 11

Edema, Angioneurotic. TREATMENT. Pituitary and adrenal preparations found useful. *Morris.* 11

Erysipelas. TREATMENT. In severe erysipelas a single small vaccine inoculation,—5 million,—preferably of autogenous vaccine, will usually cause a critical fall of temperature, and a second or third dose at about five days' intervals generally complete resolution. *Whitfield.* 56

Goiter. TREATMENT. Vaccines prepared from coliform bacilli of patient's own bowel administered in 8 cases of parenchymatous goiter, with disappearance of enlargement in one and diminution in the others. Initial dose usually 125 million, later increased, upon diminution of size of goiter, by 25 or 30 million weekly. Injections given weekly. *Langmead.* 23

Salicylates, creosote carbonate, menthol, thymol, etc., are helpful after the intestinal functions have been regulated. In nodular, cystic, colloid, fibrous, and intrathoracic goiters, iodine is seldom of value and sometimes dangerous. *Sajous.* 1

Goiter, Exophthalmic. TREATMENT. Ligation of thyroid vessels and sometimes a portion of the gland is indicated (1) in patients with mild symptoms of hyperthyroidism; (2) in the large group having acute, severe exophthalmic goiters, and the chronic, very sick patients who, having exhausted all forms of treatment, are suffering from various secondary symptoms, and (3) in cases with marked pulsation and thrill of thyroid arteries associated with cardiac dilatation and loss of weight. Thyroidectomy later advisable, to prevent relapse to former condition. Should trouble recur before a partial thyroidectomy is made, or a severe relapse after partial extirpation, inferior thyroid artery should be ligated and half of re-

maining lobe removed when improvement occurs. *Mayo.* Page 16

In early and mild cases in virgins, author begins treatment with corpus luteum, which is useful as antidote to thyroid intoxication. *Berkeley.* 20

Gonorrhea. TREATMENT. Iodine treatment gave excellent results in gonorrhea in the female: (1) Swab external genitals with a 3.5 per cent. solution of iodine in alcohol; (2) force a few drops of same solution in orifices of Skene's and vulvovaginal glands through blunt hypodermic needle; (3) with patient in Sims's position, insert Sims's speculum, swab vagina dry with cotton, and paint cervix with iodine solution; (4) swab posterior vaginal *cul-de-sac* and wall; (5) introduce narrow strip of gauze high up against posterior wall, and remove speculum; (6) give hexamethylenamine, 5 to 7½ grains (0.3 to 0.5 Gm.) four times daily in plenty of water. Where cervix and uterus chronically involved: (1) Paint cervix with iodine; (2) grasp anterior lip with volsellum and remove any stringy discharge; (3) insert small uterine sound if required; (4) introduce intrauterine syringe to fundus and instill 1 dram (4 c.c.) of iodine solution while withdrawing; (5) treat vagina as in acute cases. Repeat applications every third day in both acute and chronic forms. In all cases order hot douches of 4 to 6 quarts (liters) of hot saline two to four times daily, always followed by a 1-quart (liter) injection of 1:5000 permanganate or 1:250 picric acid. *Hofmann.* 48

Gonorrheal Vaginitis of Children. TREATMENT. Mixed autogenous vaccines of gonococcus and usually staphylococcus, streptococcus, diplococcus, colon bacillus, etc., used in 40 cases with uniformly good results. Average number of injections required for cure, 7. Initial dose, 25 to 50 million, then gradually increased. Interval between injections not less than five nor more than seven days. If after six weeks case still needs treatment, as shown by examination of discharges, a second vaccine should be made. *Wolff.* 49

Headache. TREATMENT. In headache or head pressure in nervous fatigue a fomentation applied for five or ten minutes twice, and followed by a cold compress, is effective. If headache is congestive, use hot foot bath, followed by ice-bag to nape of neck and cold compress to forehead. Sitz baths at 90° F., or cold foot baths, often relieve. *Pope.* 50

Impetigo. TREATMENT. In exceptional cases which do not yield to local measures, a few staphylococcic vaccine inoculations—usually, in fact, a single one—will cause prompt cure. *Whitfield.* 56

Insomnia. TREATMENT. In nervous fatigue (neurasthenia) this symptom is best met by cold pack or dripping-sheet at bedtime, or by the trunk compress, consisting of a coarse linen bandage wrung out of water at 65° F. and covered by several layers of same material to exclude air; it should be worn all night. Excellent also is the neutral bath at 94° to 96° F. for from twenty to sixty minutes. *Pope.* 50

Intestinal Motor Inactivity. TREATMENT. Pituitary extract recommended. Injection of 3 c.c. in adults causes evacuation in 88 per cent. of cases in from six to twenty minutes. Usually constipation later recurs, but often a single injection will induce several stools on same day and keep bowels regular for a day or two after. The extract is valuable for prophylaxis and cure of postoperative intestinal paresis. Continued, it tones up intestine and also stimulates stomach motility. For lasting effect, inject ½ c.c. intramuscularly every day for a week, then 1 c.c. every three days for another week, and thereafter 1½ c.c. once weekly. *Houssay and Beruti.* 27

Intestinal Stasis, Postoperative. PROPHYLAXIS. Harmful effects of abrasion of visceral peritoneum in operations can be overcome by introducing 6 ounces (180 c.c.) of sterilized mineral oil in abdomen and sponging it over coils of intestine. *Burrows.* 52

Lupus Erythematosus. TREATMENT. Benefit followed use of adrenal substance in this condition. *Morris.* 11

Lupus Vulgaris. TREATMENT. Where Finsen light not available, old tuberculin is capable of great service. Begin cautiously; then make steep rise in dose as soon as one dose ceases to call forth reaction. *Whitfield.* 56

Psoriasis. TREATMENT. Thyroid preparations found especially efficacious in psoriasis associated with adiposity. They should not be exhibited until eruption is fully developed. *Morris.* 11

Puerperal Fever. PROPHYLAXIS. Whenever irrigation of vagina with boiled water through speculum yields a yellowish fluid, one should irrigate once daily for at least ten days with a 1:200 solution of lactic acid. Morbidity thereby reduced from 28.6 to 7.6 per cent. Full baths to be avoided before delivery. *Zweifel.* 54

TREATMENT. Intravenous injections of distilled water given in 142 cases of puerperal fever. Of 62 patients with pyemia and septicemia, 42 were cured. In an hour or hour and a half after an injection there is usually a chill, with rise in temperature. By evening or the following morning temperature will have fallen to normal, sweating usually accompanying the drop. *Ilkewitsch.* 53

Rabies. TREATMENT. Potassium iodide in 2 per cent. solution, 1 tablespoonful or dessertspoonful at frequent intervals throughout course of preventive injections, recommended as adjuvant in treatment. In 3 cases of abortive rabies symptoms promptly disap-

peared after use of potassium iodide. Advocated especially in cases where infection has existed in latent condition for some time. *Koch.* Page 55

Tuberculosis, Pulmonary. Diagnosis. Contrast between resonance of air-containing tissue and deadness of the airless spot is striking when light percussion practised. It on increasing force of stroke dullness remains, one may conclude that there is an extensive area of airless tissue. A shorter apex on one side is of immense significance. In infiltrated apex a long, held inspiration gives a duller note on percussion than is found over healthy side; this is often of value in doubtful cases. Where history, symptomatology, and course of disease point to tuberculous infection, one may safely diagnosticate tuberculosis without any definite auscultatory signs. *Fishberg.* 54

Ulcers. Treatment. In indolent tuberculous ulcers, 1 or 2 doses of old tuberculin usually cause complete healing in a week or two. *Whitfield.* 56

Urticaria. Treatment. Pituitary and adrenal preparations found useful. *Morris.* 11

Vomiting. Treatment. In paroxysmal vomiting of chronic, recurrent character, where no organic disease of stomach is discoverable, adrenal gland treatment is frequently of value. *Berkeley.* 20

Book Reviews

Ophthalmoscopic Diagnosis. By Dr. C. Adam, Assistant at the Kgl. Univ.-Augenklinik, Berlin. Translated by Matthias Lanckton Foster, M.D., Ophthalmic Surgeon to the New Rochelle Hospital; Member of the American Ophthalmological Society, etc. Octavo of 229 Pages, with 86 Colored Pictures on 48 Plates and 18 Illustrations in the Text. New York: Rebman Company, 1913.

In this useful work, the author, a successor to Julius von Michel, has followed the lead of the latter in laying special stress on the relations existing between diseases of the eye and those of the general organism. The ophthalmoscopic appearance is largely taken as a basis for classification of the various ophthalmic affections; and while the book is well entitled, in view of the number and excellence of its illustrations, to be designated an atlas, the accompanying text fully presents the etiologic similarities and relationships between the various conditions pictured and makes of the work a practical manual of diagnosis. Special attention is given to the needs of the general practitioner, neurologist and syphilologist, various phases of albuminuric retinitis, diabetic retinitis, choked disc, luetic and tuberculous chorioretinitis, etc., being amply considered. In the index are given not only the individual ophthalmoscopic symptoms, but also the general diseases of which they constitute the ocular signs. In a preliminary section the technique of ophthalmoscopy is explained. The colored illustrations are all splendid, and their number, 86, affords evidence of the completeness with which, along with their explanatory legends, they cover the field. The translation is good.

Diet in Health and Disease. By Julius Friedenwald, M.D., Professor of Gastroenterology in the College of Physicians and Surgeons, Baltimore, and John Ruhräh, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Fourth Edition, Thoroughly Revised and Enlarged. Octavo of 857 Pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $4.00; Half-morocco, $5.50, net.

A section on the mechanism of digestion has been added in the fourth edition of this useful book. The sections on metabolism, on the prescribing of diet in general, and on diabetes and gout have been entirely rewritten, as have to a certain extent been also the description of the diet in fevers, including typhoid fever, and the portion of the work on salt metabolism. Duodenal alimentation and the use of the soy bean are considered for the first time, various new diet-lists have been introduced, and the chapter on infant feeding has been thoroughly brought up to date. As in former editions, the aim of the book is essentially practical, the authors presenting a concise and clear account of the kinds, composition, and of the uses of food, under both normal and abnormal conditions. The subject is considered from every angle, the physiology of digestion being first set forth, the various classes of foodstuffs and beverages systematically discussed, the bearing of food preservation, cooking, and adulteration on nutrition pointed out, and, next, the subject of infant feeding succinctly presented. About 100 pages are devoted to the last-mentioned topic. After this come a section on diet for the aged and in pregnancy, one on rectal feeding, and then a large section, occupying over 300 pages, in which the diet in various special diseases is taken up. In the remaining 150-odd pages are chapters on special cures,—such as the buttermilk cure and salt-free diet,—the dietetic management of surgical cases; army and navy rations; dietaries in public institutions; recipes for the preparation of beverages, gruels, vegetables, milk derivatives, etc.; condensed, rapid-reference diet-lists; a sample pamphlet of information for distribution among the poor in summer, etc. The practitioner will find this book decidedly helpful in solving the dietetic problems that daily present themselves to him.

The General Field

Conducted by A. G. CRANDALL

A Strange Policy

According to a well-known magazine, the fees accruing to the Patent Office at Washington have thus far enabled that department to turn over as profits the tidy sum of $7,000,000.

Notwithstanding this fact, such has been the niggardly attitude of Congress that most of the experts in the Patent Office soon relinquish their positions and enter private employment, although their experience and technical skill are sadly needed for the proper conduct of the Office.

This question has been brought up time after time, but for some reason Congress has remained inactive.

It is true that as at present conducted, with the prospect of endless litigation where there are conflicting patents, the system now in vogue provides enormous fees for attorneys, but this seems to be about the best that can be said for it.

Physicians who, in accordance with the ethical standards of their profession, decline to secure patents on medical appliances, reflect great credit upon their profession by so doing. However, they may console themselves in that, whatever they may lose by not trying to patent their inventions, they have incidentally saved themselves much possible annoyance.

* * *

The Poultry Trust

Several prominent dealers in poultry of New York and vicinity have been sentenced to jail because of certain trade methods they have employed which are contrary to the antitrust laws.

It is said that faith is an essential quality in all modern business. Without faith the entire superstructure would fall to the ground. Unfortunately, there is probably no department of commerce which puts our faith to quite so severe a test as the poultry business.

Just how long a time has elapsed since a cold-storage chicken changed from the quick to the dead is one of the contributing causes to the neurasthenia prevailing widely among housekeepers. This, of course, is due to a lack of that implicit faith which is such a delightful thing when it exists. Another element of the poultry situation in which there is an even greater lack of faith is the egg. While the egg is not intrinsically poultry from its external appearance, internal inspection may prove to the contrary, thus producing other etiologic factors of housekeeper neurosis.

The sympathies of a good many men of business may go out to the poultry dealers undergoing imprisonment, but the probabilities are that sympathy among housekeepers will be largely absent.

* * *

Free Speech

One of the accredited privileges of our natural existence is that of free speech.

The most conspicuous example of free speech is the newspaper, to be found in all the cities, towns, and a

considerable number of hamlets. The slightest suggestion of any curtailment of newspaper freedom is sufficient to start an avalanche of denunciation from one end of the country to the other. Yet this same privilege of free speech is pretty expensive.

In order that many thousands of newspapers may exist and protect our liberties, it seems to be necessary for most of these newspapers to secure part of their revenue from the advertisers of all kinds of noxious patent medicines.

To estimate properly the benefits of free speech as symbolized in the newspapers, it is necessary to write down on the other side of the ledger column the cost in money, in vain hopes and natural injury to health, of the illegitimate advertising which enables many of these newspapers to exist.

Some of the newspapers most prominent in criticising the ethics of others carry the most obnoxious forms of quack advertising.

Every newspaper which runs an advertisement of a remedy which is recommended as an absolute cure for a serious bodily ailment should hear from its readers in the most emphatic terms of protest.

* * *

Some Scientific Deductions

While many burning questions difficult of solution may yet become *passé* and are retired to the background, the cost of living problem seems to be an exception, losing none of its interest.

A New Yorker who has been devoting intense study to this subject thinks he has found a solution. He says that it is generally conceded by physicians that 999 persons suffer from overeating where 1 person dies of starvation. Therefore, the most practical way to cut down the cost of living is to stop eating so much.

Following along this line of thought, let us suppose an active suffragette, devoting a considerable share of her energies to general uplift work and coming into contact with other kindred spirits, should take up this question in a practical way. With the aid of a fireless cooker, working while she slept, she could provide her family with wet cereals for breakfast at a moderate expense. For lunch, those who chanced to be at home could have dried cereals, at a less expense; while for dinner, what could be more suitable than some one of the numerous varieties of ready-prepared soups? In this way that strain upon the family digestion produced by roast beef, corned beef and cabbage, or some of the other alleged delicacies of a barbaric age could be avoided entirely. If a higher percentage of protein was required the market is full of canned baked beans; in fact, there seems to be no limit to the combinations which can be easily figured out once you have the right idea.

The indications are that overfeeding among certain families will soon be a thing of the past.

* * *

The Prodigal Son

When the ultrabusy man of big business and his society wife wake up to the fact that, as a natural consequence of their neglect, their more or less no-account son has married a shopgirl, their first impulse is to try to right the wrong.

How do they go about it? Instead of looking for some good qualities in the wife of humble origin, they set out to convince the masculine product of their neglect that he has made a mesalliance. They exhibit a hostile attitude to the wife, and if, as a result of her inexperience and desperation, she may be led in some way to any act of the slightest indiscretion, they gladly seize upon that fact as an evidence of the martyrdom of their son and heir, and shrewd lawyers, backed with plenty of money, carry out their wishes.

An editorial writer in the New York Sun once remarked that the only reason why the ultra-aristocratic families did not mostly become physical and mental degenerates was that occasionally there was some male member of the family who had sufficient intelligence and good judgment to elope with the cook. But, unfortunately, the results of such an elopement are more likely to be as above indicated than in the interest of the modern ideas of eugenics.

Some of the philanthropically disposed people who are establishing loan agencies for the purpose of protecting poor borrowers from the tender mercies of the loan shark, should also form a society for the protection of young wives of humble origin from the injustice and snobbish persecution of the husband's parents.

* * *

To a Peanut Basis Eventually

The gradual exhaustion of the coal mines and oil fields seems to be expected by those lordly magnates who claim to be best qualified to express opinions on the subject.

The agricultural areas produce less and less on the average. Population steadily increases and the demands upon the world's natural resources become steadily greater.

The outlook for the coming generations would be dismal indeed were it not for the peanut. This exceedingly democratic article of commerce is enthusiastically recommended as a protein equivalent for the meats by noted economists. It is also rich in oil, and a great inventor has designed an engine which will burn peanut oil, thus solving the problem of steam energy.

What is the use of worrying about deforestation, soil exhaustion, and mineral wastefulness? The peanut makes the future secure.

Thus we can expect to come to a peanut basis eventually. Our politics have been on this basis for a considerable time already.

* * *

The Doctor's Income Tax

The provisions of the income tax are very mystifying to ordinary citizens. Just what income is seems to be somewhat obscure. Obviously it devolves upon the collectors of the tax considerably to clarify the new law upon this point.

A large number of physicians would especially welcome expert knowledge as to what constitutes their real authentic incomes. Personally, they have never been sure.

Those who keep books carefully have their theories on the subject, but there are a host of practitioners who do not even have a theory.

If a doctor devotes three of the wee small hours to alleviating the sufferings of an urchin who has eaten too

many green apples, and in payment thereof receives three hours of the lad's father's time devoted to mowing the doctor's lawn, the question naturally arises, Is this income, and, if so, should it pay a tax?

Doubtless a good many doctors would gladly pay the maximum tax on a large amount of theoretical income if it could, by some expert process of transmutation, become real income.

* * *

The Cold-air Treatment of Tuberculosis

"The only time we are comfortable is when in the dining hall."

This is the report of a tuberculosis patient under treatment on conventional lines at a mountain sanatorium. Another patient reports total inability to feel warm when in bed although covered with nine heavy blankets.

A certain class of tuberculous patients seem to improve in the open air of winter, even when suffering great personal discomfort in a freezing temperature. But there are also patients who without open-air treatment, and even when compelled to continue their occupations under unhygienic conditions, yet with a liberal diet and avoidance of excessive fatigue, will retain their health and live to a good age.

Exposure to extreme cold with insufficient protection is certainly very depressing for persons who are well. Just why this continuous discomfort should be a good thing for tuberculosis brings in the element of mystery. If such an experience is essential to the rational treatment of tuberculosis in winter, the treatment of the open-air patient in summer should logically contain, as an incidental factor, the application of artificial cold.

Many an excellent therapeutic measure has gone into the discard because of the reaction resulting from the tactics of those who carry every good thing to excess.

* * *

Bread or Cake

When a deputation from the Paris slums was clamoring for bread, a very undiplomatic queen is reported to have said that if the rabble could not eat bread they should eat cake.

A large element of those now afflicted with the prevailing social unrest seem to have acted on this advice. The improvident habits of certain families are sufficiently proclaimed by the enormous sale of prepared foods.

A morning patron of a large grocery and delicatessen store remarked upon a huge display of cakes exhibiting a great variety of shapes. "Oh," said the elderly salesman, confidentially, "it is all the same dough and they will be all gone long before night. Your wife wouldn't use them, nor my wife either. But you see, the women of the laboring families don't know how to cook."

One of the first aids to many a discouraged and distressed family should be a cook book, designed to suggest methods for preparing simple and inexpensive substitutes for the prepared foods of maximum costliness and minimum nutritive values.

Improved Bacterial Therapy

SEROBACTERINS

(Sensitized Bacterial Vaccines)

"Action **sure, rapid, harmless and durable.**"—A. Besredka.

Serobacterins are suspensions of bacteria "sensitized" by treatment with specific immune serum.

The advantages of **Serobacterins** may be briefly summarized as follows:

1. SEROBACTERINS do not cause opsonic nor clinical negative phase. In the process of sensitization the bacteria are saturated with the specific antibodies, consequently they do not absorb antibodies from the patient, preventing unfavorable reactions or the so-called negative phase.

2. SEROBACTERINS produce immediate active immunity.
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For a complete review of the literature on Serobacterins see Mulford Digest for December.

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Serobacterins are sensitized bacterial vaccines or suspensions of killed sensitized bacteria. In the language of the laboratory, they are produced by saturating bacteria with the specific antibodies found in the serum of an immunized animal, removing the excess of serum by centrifuging and suspending the bacteria in a saline solution. According to the trustworthy reports of bacteriologists and clinicians, they are destined in great measure to supplant other means of immunizing against and treatment of many infectious diseases.

The method of sensitizing is, in brief, the treatment of killed bacteria with specific immune serum whereby the bacteria unite with the immune bodies present in the serum, so that upon injection the combination is ready for immediate attack by the "complement" in the patient's blood.

There is thus secured a great gain of time over the older methods of bacterial therapy, and whether in prevention or treatment this immediacy is of the utmost value. In a few days, for instance, by typho-serobacterin, the practitioner may now secure for his patient immunity against typhoid as formerly in nearly a month with the old typhoid vaccine.

Other advantages are that there is no local irritation at site of injection and little or no lassitude or sickness. More important, still, is the fact that there is no negative phase. The size of the doses may also be greatly increased, even quadrupled, thus assuring rapidity of production and strength of immunity.

Of interest in this connection are the laboratory results of Theobald Smith and the work of von Behring in combining diphtheria toxin and antitoxin for immunization against diphtheria. By making mixtures containing varying amounts of toxin and antitoxin they were able to secure any degree of immunity—from a short passive immunity due to the serum to an active immunity of long duration, resulting from the action of the toxin.

To the foregoing advantages of the uses of serobacterins it may be added that in very late stages of the disease, when the bacterial vaccines and even serum treatment is ineffective, successful results are sometimes obtained and life is saved.

Besredka, of the Pasteur Institute, authoritatively summarizes the matter by saying:—

"Whatever the nature of the virus, whether the microbe of plague, dysentery, cholera or typhoid fever, or whether the virus of rabies or the toxin of diphtheria, whether the microbes are killed or living, sensitization confers upon them properties which convert them into vaccines of the first order, possessing an action which is sure, rapid, inoffensive and durable."

The results of the clinical use of serobacterins in actual practice give, of course, the final and convincing test. Of such reports one notices that of Gordon, on the successful use of strepto-serobacterin (sensitized streptococcus vaccine) in erysipelas, emphasizing the fact that when the treatment did no good it did not do the slightest harm; that prophylactically in the face of epidemics it should have a great future; that in

(CONTINUED ON ADVERTISING PAGE 33.)

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Dr. F. A. Hesse, of the Surgical Clinic of Prof. Pels-Leusden, University of Greifswald, Germany, who in a previous communication (Deutsche medizinische Wochenschrift, 1912, No. 14) reported adversely on Hormonal, presents the results of a very much more extensive investigation in which he has used the improved (albumose free) Hormonal (Therapeutische Monatshefte, Oct., 1913). He states that Hormonal was only used in cases of gravest intestinal paresis where all other peristalsis stimulants had failed. Contrary to the experience with the older product which had several times produced powerful blood depression with disquieting manifestations, the improved Hormonal showed only very minor effects upon the blood-pressure when administered intravenously at the rate of 1 c.c. per minute. Only in 1 case was the blood-pressure depression sufficiently important to interrupt the injection by camphor administration. In doses of 16 to 20 c.c. the effect upon the intestinal peristalsis was always very favorable, in some cases striking and always permanent, *i.e.*, neither a repetition of the injection nor an increase in the doses became necessary. The author designates Hormonal therapy as free from danger when used under the most careful observation of the above precautions and advocates its employment only in grave cases which fail to respond to other forms of treatment. On the other hand, he strongly emphasizes the fact that the improved preparation (now exclusively on the market) has shown in his hands a most favorable action and in several instances has actually been the only means of saving the patient's life.

Dr. Frederic J. Plondke, Chief Surgeon, St. John's Lutheran Hospital, St. Paul, Minn., referred to Hormonal in a paper on "Preparatory and Post-Operative Treatment," read at the Forty-fifth Annual Meeting of the Minnesota State Medical Association, Minneapolis, Oct. 3-4, 1913 (Journal-Lancet, Dec. 15, 1913). He stated that Hormonal in 20-c.c. doses has given him the best results for the promotion of peristalsis, especially in old patients where the distention was

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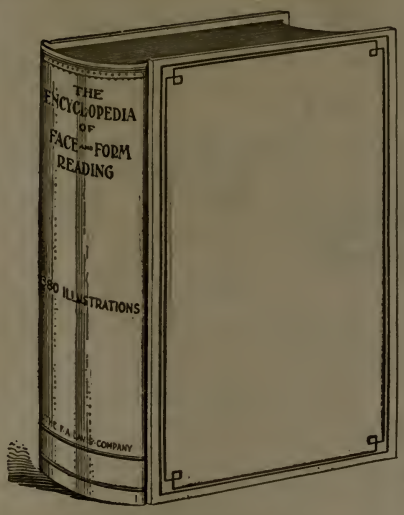

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